OCTOBER 1959

COMMERCIAL CAR JOURNAL

CONSTRUCTION SECTION
follows page 104

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS

DON BUCK Says . . .

Ce The saddest words in accident prevention—

It hasn't happened yet 99

also in this issue...

NEW CARS AND TRUCKS FOR 1960



Earl D. Wood, Vice President, Equipment and Maintenance, left, and L. R. Peterson, Chicago Maintenance Superintendent, examine one of General Expressway's new International Model DCOT-405 Tractors equipped with Fuller R-96 ROADRANGER Transmissions.

Geared by FULLER . . .

General Expressways gets five-star service from ROADRANGERS

General Expressways, Inc., Chicago, recently purchased 125 International Model DCOT-405 Tractors equipped with 220 hp diesel engines and 10-speed Fuller R-96 ROADRANGER Transmissions.

A major reason General Expressways specified the semi-automatic, single-stick ROADRANGERS was the excellent record of the 8-speed R-46 ROADRANGERS in the company's older International Model RF-195 and VF-195 Tractors. Placed in service in 1956, 43 of these tractors—used primarily on routes between Chicago and Cleveland—accounted for approximately 120,000 miles per week.

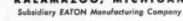
Earl D. Wood, Vice President, Equipment and Maintenance, says: "We get a lot of tough, high-mileage service from the R-46 ROADRANGERS our older tractors. Maintenance costs have been low and, because engines work in the peak hp range at

all times, fuel economy is very satisfactory and average road speeds are up. Our drivers like the closely spaced forward ratios of the ROAD-RANGERS, as well as the fact that, with 1/3 less shifting, driver fatigue is reduced. We will continue to specify ROADRANGER Transmissions on new-equipment purchases."

Ask your dealer about the Fuller ROADRANGER best-suited to put more profit in *your* operation.

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"on all of our trucks ... big or small ...

we use Pedrick rings", states James Owens, Maintenance Superintendent for Abbotts Dairies, Inc. "We've discovered that they give top all-around performance no matter what the driving conditions or type of truck. We get dependability with longer life at lower costs. What more can you ask?"

What about your truck or fleet? At your next overhaul, if you want the best, then specify Pedrick FORMFLEX Chrome piston rings. It will pay you in added service miles, reduced downtime, greater savings. WILKENING MANUFACTURING Co., Philadelphia 42, Pa. In Canada-Wilkening Manufacturing Co. (Canada) Ltd., Toronto 2.



the United States.

Pedric DEPEND ON OR THE RIGHT RING JOB

COMMERCIAL CAR

-October 1959 Vol. 98 No. 2-

SAFETY

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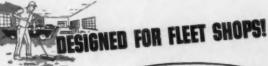
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Sales Manager, Bay Rental Service, Inc., Green Bay, Wis.

... and find the answer to your tire problems!

As Sales Manager of the Bay Rental Service, Inc., Mr. Schaffer has to make sure that his company's trucks give unfailing service...

Interruptions in service cause loss of rental revenue as well as dissatisfied customers. In short, it's just good business to keep the Bay Rental trucks properly equipped to roll without fail under all sorts of road and weather conditions.

That's why you'll find Kellys on every one of the 95 trucks in the Bay Rental fleet. "Our units are put to severe use," says Mr. Schaffer, "and we cannot afford to risk delays because of tire failures. So we depend on Kellys. In addition to giving completely dependable service, Kellys are also economical. The cost-per-mile for Kellys is remarkably low, because we get long mileage on the original treads plus unusually long recap mileage."



Bay Rental Service, Inc., leases trucks to bakeries, furniture companies, dry cleaners and a variety of short-haul contractors. Most of the trucks are in continuous operation within a 100mile radius of Green Bay, largely west and north of their starting point.



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EDITORIAL COMMENT

When Does A Gadget Become A Necessity?

REGULATING HIGHWAY safety has always been a tricky subject. Generally speaking, none of us like anything that's rammed down our collective necks in the form of law or regulation. And when the wording gets couched in the language of safety, an automatic red light usually starts flashing.

But sometimes we may resist too much. Sometimes we may not be willing to go far enough.

Take the lowly turn signal for example. When turn signals were first introduced, a few states made them mandatory. Screams went up from coast to coast. Vehicle manufacturers dubbed it a silly gadget. Some users, and even a few state administrators, called it a dangerous instrument.

But the idea caught on and the gadget became a necessity . . . almost. Today nearly all states require turn signals on new vehicles. In addition, 32 states require turn signals on all "big" trucks, regardless of age. A few, like New York and Pennsylvania, now include all trucks.

Meanwhile, the number of accidents "resulting from failure to signal" has been drastically cut. In the 10 years from 1949 to 1958, deaths from this cause were reduced 33 per cent and injuries 48.5 per cent! (Figures from Travelers Insurance Companies, Hartford, Conn.) This in spite of an increase of 50 per cent in total registrations. Trucks had the best record of all.

Yet today there are about 18 million older vehicles still not equipped with turn signals—protected by "grandfather rights."

Is this not a case in point where perhaps we have not gone far enough? Should an ancient jalopy be privileged to cause an accident just because of its age? Will the deaths be less fatal, the injuries be less serious, the damage less expensive? Remember in this type accident, another vehicle is always involved.

Come now, you're not really thinking about hand signals are you? You mean the way people used to stick their hand out on a warm summer day? Sometimes up, sometimes down, but never really right or logical or uniform. If there was ever a law that should be scrapped, it's that one.

While we're at it, let's take a look at a few other gadgets that became necessities . . . almost. The windshield wiper is required on every vehicle, but what percentage really work? The outside mirror became a necessity for "big" trucks. But it's still considered only a gadget for the smaller vehicles even though most of us know it helps prevent accidents, particularly on multilane highways.

The privileged few who have windshield washers know what they can do in "dirty weather." Operators of the million trucks equipped with four-way flashers know what they can do when a vehicle breaks down. So does the American Trucking Assns. which has recommended them . . . but only for those who can "afford" them.

Perhaps the time is ripe to realign our thinking on safety equipment regulations . . . especially when it comes to upgrading older vehicles.

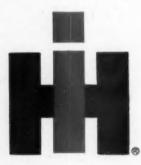
Bart Rawson Editor

TRUE TRUCK ECONOMY!

V-8 AND 6-CYLINDER ENGINES ARE TRUCK-BUILT FOR ECONOMY UNDER LOAD!



Built with no compromise! International Truck compact-design models for terminal pick-up and delivery are all-truck from husky V-8 or six-cylinder engine on through! Short bumper-to-back-of-cab gives you 64 cu. ft. of additional payload area compared to conventional models of same overall length. Cabs offer comfortable high-backed seat that measures over five feet across, extended glass area. No "doghouse" in the cab...more leg room and easier servicing... all of V-8 engine is under the hood. Models up to 33,000 lbs. GVW tandems.



Your payoff with International Trucks is in more than measurement of gallons of gas and fractions of pennies . . . it's in dollar-wise ability. The ability to take the load of your job longer with far less expense in costly parts and downtime. This means true truck economy both over the miles and over the years in use!

For the full story, see your Interna-TIONAL Dealer about a demonstration of the truck built to save time and money on your job!

Remember, too, INTERNATIONAL offers you a wide range of diesel and LPG models. Ask about them now!



Highballs 48,000 Lbs. Gross... costs less than competitive tractors that haul less! Compare International model B-180 tractors with any other make—you get a lot more truck for a lot less money! Take your choice of a high-performance 197 hp. V-8 or an

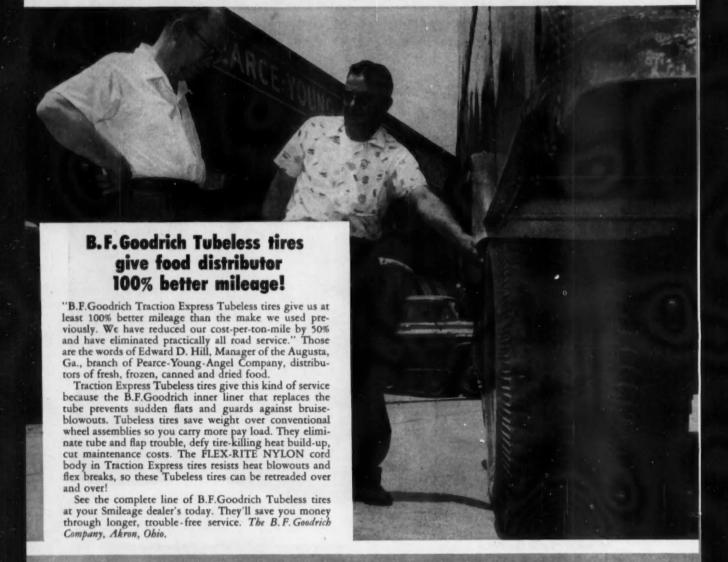
economy-proved "six." Both engines have the power needed in a lightweight unit to haul bigger payloads. Heavy frames take the extra stresses of extra weight. Optional heavy-duty rear springs, axles to 7,000 lbs. in front and 18,500 lbs. in rear.

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Don't Over-Lubricate Does Turbocharging Pay Off? Leaky Intake Manifold Gaskets Plymouth Taxicab Shift Linkage **Dodge Propeller Shaft Flange Bolts** Fuel Filters Are Doing a Better Job Which Type Spring Do You Have? Ford Changes Manifold Bolt Torque A Mechanical Quiz **Correcting Dodge Engine Noise** Safety Rules for Handling "Freon"

Don't Over-Lubricate

700 MUCH OIL in the wrong places may cause just as much trouble as no oil at all. Points frequently over-greased or over-lubricated are the distributor, generator, water pump and front wheel bearings.

It goes without saying that over filled gear boxes in time will damage seals or will permit oil to get on other units. Too much oil in the crankcase will produce deposits and coking of the combustion chamber.

In distributor lubrication, eight to 10 drops of engine oil is sufficient for hinged cap oilers every 1000 miles. Apply a thin film of special lubricant to the face of the breaker cam every 5000 miles. A few drops of oil should be applied to the wick under the rotor. Grease cups should be turned one turn every 1000 miles. More than this will cause oil soaked parts which will pick up dirt or burn and result in spark failure.

In generator lubrication, eight to 10 drops of engine oil at the hinged cap oilers is sufficient every 1000 miles. More than this will seep into the commutator and cause poor performance.

Water pumps (the lubricated kind) frequently get too much grease. When the bearing is overlubricated, grease may break through the seal and get into the cooling system. This deteriorates hoses and contributes to radiator restrictions.

Overfilling of the front wheel hubs contributes to leaking seals and loss of lubricant when the temperature rises. Bearings and races should be filled with lubricant and the space inside the hub left for expansion.



TIMELY NOTES ON TRUCK, BUS, PASSENGER CAR FLEET MAINTENANCE AND OPERATION briefed by ED SHEA, Technical Editor

Does Turbocharging Pay Off?

FOR ON-HIGHWAY use, should you choose Bert Orden of Consolidated Freightways discussed the question at last month's West Coast Meeting of the Society of Automotive Engineers. His conclusion-after studying NH and NT engines used in 4 x 2 and 4 x 4 tractors used to pull 70,000 lb gross: Turbocharged engines get more from the same amount of fuel but cost more in maintenance.

But turbocharging might be worth the added cost, he adds. "If the increased horsepower you receive is justified by improved service necessary to hold your business, or if it can be justified by reduction in overtime paid to drivers, or for any other reason that actually produces more profit for the company, then the operator should seriously consider increasing the horsepower.

"In most cases, I would say that if increased horsepower is necessary, then the easiest way that I know of, at the moment, is turbocharging the present engine, since this can usually be accomplished at a lesser cost than installing a higher-powered naturally aspirated engine. Usually when going to a higher-powered naturally aspirated engine there is a weight penalty, so therefore, the turbocharging seems the most desirable at the moment."

Leaky Intake Manifold Gaskets

RUNNING INTO any late model overhead valve V-8's which are oil-fouling spark plugs? Don't overlook the possibility of a leaky intake manifold gasket. According to Champion Spark Plug Co., many of the current overhead valve V-8's have a narrow gasket area separating the passages in the intake manifold from the tappet chamber and/or valve cover.

If the intake manifold gasket is leaking in these areas, the oil mist and vapors may be drawn through the intake manifold and into the combustion chamber. This makes an excessively rich fuel mixture which can foul the spark plugs in the affected cylinders.

(TURN TO PAGE 12, PLEASE)

Safely withstands all



CORRECT CHEMICAL BALANCE of FORMULA provides you with a good, safe brake fluid. There's none better.

For safety's sake, all trucks with hydraulic brakes should have the brake system filled with Wagner Lockheed No. 21B Super Heavy Duty Brake Fluid. It has correct chemical balance to safely withstand all operating conditions.

What is correct chemical balance? Briefly it is the right, high quality ingredients—compounded in proper proportions and sequence—scientifically blended in the process of manufacturing so as to produce a brake fluid capable of best overall results under all operating conditions.

There are some brands of brake fluid of sub-standard quality that have a high boiling point—but do not have the correct chemical balance to also have a low freezing point, or vice versa . . .

Other brands may lack correct lubricating qualities and may cause rubber parts of the brake system to swell, and cause metal cylinders and pistons to corrode . . . Wagner Lockheed No. 21B Super Heavy Duty Brake Fluid has none of these faults.

operating conditions!

Wagner Lockheed No. 21B SUPER HEAVY DUTY HYDRAULIC BRAKE FLUID

- functions under high braking temperatures without gassing.
- withstands sub-zero temperatures without congealing.

You can use Wagner Lockheed No. 21B Super Heavy Duty Brake Fluid and have complete confidence that it safely withstands all operating conditions. This top-quality product surpasses S.A.E. Specifications 70R1 and 70R3, and conforms to Federal Specifications.

You'll gain by standardizing on Wagner Lockheed 21B. It has the following features and advantages:

Chemically balanced—with the correct proportion of all ingredients required to make an all-season fluid that functions perfectly under all normal operating conditions... Maintains high operating temperature characteristics, yet functions in sub-zero weather.

- Chemically balanced—with just the right amount of costly type lubricant to provide proper lubrication to all parts of the brake system.
- Chemically balanced—with exactly enough moisture absorber so that metal parts in brake system will not rust or corrode.
- Chemically balanced—to maintain chemical characteristics even after long use.
- Does not cause cups or hose to swell . . . Forms no gummy residue . . . Does not evaporate rapidly . . . And, 21B is the safest brake fluid money can buy. Packaged in 12 oz., quart, gallon, 5, 30 and 54 gallon containers.

FOR DETAILS on the complete Wagner Lockheed line of Brake Fluid, Brake Parts. Power Brake Repair Kits, Brake Lining and Lined Exchange Shoes—contact your nearest supplier of these quality products, or use coupon to request FREE Catalog.

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FLEET CARS



Continued from Page 9

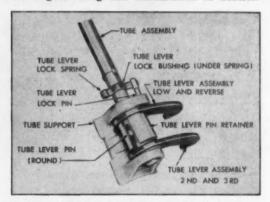
Plymouth Taxicab Shift Linkage

PLYMOUTH reports a new manual shift linkage interlock available for taxicabs. It prevents transmission lockup in low gear under abnormal operating conditions.

This new interlock holds the low and reverse shift lever in the neutral position while shifting into second and high. All necessary parts for this conversion are available from Plymouth.

One point Plymouth stresses: Use the new round-headed cross-over pin MoPar No. 1675771. Do not use the square-headed ipn MoPar No. 1946578, as it will cause improper selection of gears. First and reverse gear shift control rod has been increased from \(^3/8\)-in. to \(^1/2\)-in. diameter.

The interlock linkage adjustment is made with the engine idling and transmission in neutral.



With a 10 lb force, pull up and push down on first and reverse tube lever at the swivel block. If the gears clash while pushing down, move the swivel block upward on the shift rod. If gears clash while pulling up, move the swivel block downward. There will be no gear clash when linkage is correctly adjusted.

Here's the cross-over adjustment. Adjust the second and high shift rod to match the lever pin slots for a smooth cross-over feel.

Dodge Propeller Shaft Flange Bolts

OTICE ANY slight vibration on 1959 Dodge models D800 and 900, T800 and 900 trucks equipped with an auxiliary transmission? A Dodge bulletin says this can be traced to the short coupling propeller shaft. This vibration is usually noticed on acceleration, de-accelera-

(TURN TO PAGE 16, PLEASE)



ADD BONUS RECAPS TO BIG ORIGINAL MILEAGE AND ... WOW!

Total cost-per-mile really hits bottom with Lee Super DeLuxe Highway Nylons

There's one way to prove it—keep accurate tire mileage costs. Lots of smart operators do. They are the ones who know you can't beat Lee Nylons. Why? Simple. Rugged construction that gives long original mileage and leaves a carcass strong enough for multiple recaps.

This takes some doing—and Lee does it. By using the toughest cord known. Super-Tensile Nylon. Produced by an exclusive Lee process. Users say this has other advantages, too. Protects against impact breaks, blowouts and moisture damage.

And the tread! Natural rubber. Special Lee design. End result: extra traction, cooler running on the road, added tire life.

So . . . how about Lee Super DeLuxe Highway Nylons for your fleet? Tube or tubeless, they'll give you the greatest original mileage and more recaps than you can count.

P.S. About those recaps...specify Lee Premium Double-Life Tread Rubber, branded for your protection, and watch your Treasurer smile.

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Shown is the Lee Super DeLuxe Highway Nylon. Whatever your truck tire needs, there's a Lee that's right for the job.



LUBE LOGIC 5 new tips



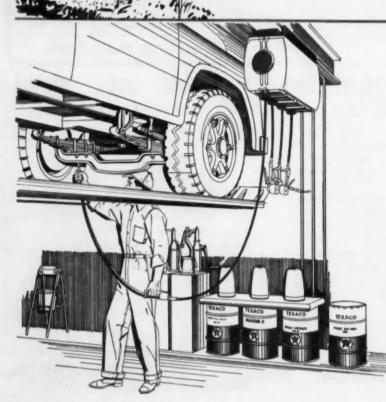
IF YOUR DIESEL SMOKES IT CAN **CET YOUR ENGINE IN TROUBLE**

Fuel injectors on diesel engines sometimes tend to drift off or "dribble." One of the symptoms is smoke-and the engine may be in for trouble unless you take some definite countermeasures.

Fixing the injection system is the only way to cure the trouble, of course, but if you can't get at it right away, here are some temporary measures that can keep the extra fuel from gunking up your engine:

First, shorten your drain periods! Incompletely burned fuel is contaminating your crankcase.

Second, use a top grade oil. Unless you use an oil with full detergent and dispersion characteristics, you may have a gunked up engine on your hands-fast! That's because the incompletely burned fuel going into crankcase will bring undesirable products along with it. Your TAE* can give you the details.



PUMP GREASE, NOT GRIT!

Lubricants stay cleaner, as everybody knows, if you avoid switching them from one container to another. But to make sure that abrasive grit doesn't get into lube points along with the grease, some shops have turned to centralized supply. Grease is piped directly from drum to gun. Your TAE* might have some valuable suggestions on the best setup for centralized supply in your shop.

for keeping 'em rolling



LEFT IN THE DARK BY STANDARD TIME?

Fall weather brings early dusk and more miles of night driving. Now's the time to make sure all the lights on your rig—tractor and trailer—are clean and working right. If you've got dual headlights, make sure they're aimed right. While you're at it, check up on your emergency equipment—worklights, flares and such.



PRESS FITS WITHOUT JUDO

Maybe they'll laugh when you say you can make a good solid press fit that'll come off like an old shoe when you want it to. But you can do it, and without tearing or gouging the metal. The secret is Molytex. And with Molytex there's no danger of corrosion, either. Try it the next time you want to make a press fit that you may have to disassemble in the future. Molytex makes it easier in both directions.



You can do away with the three-men-and-a-boy routine and the six-foot pipe on the wrench handle if you coat wheel studs with Texaco Rustproof Compound L before you put the nuts on the studs. That way you'll keep rust off the threads, and the nuts will back off much more easily when you have to change the wheel.



*TEXACO AUTOMOTIVE ENGINEERS

Every month we'll bring you a batch of "sleepers," little angles, so easy to overlook, where big savings in money and time can be made. But month in and month out your local TAE* is the best source of money-saving lubrication ideas. Don't forget that "lubrication is a major factor in cost control."

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ENGINES

Continued from Page 12

tion and in neutral. It increases gradually with engine speed. The vibration makes a chattering or rattling type of noise.

Here's what Dodge recommends: Check the short coupler propeller shaft flange bolts on the rear of the main transmission and on the front of the auxiliary. The correct bolts are \%-in. x 24 TPI x 1\%-in. long with a threaded length of \%-in. If shorter bolts threaded over the entire length are installed at these points, they should be removed and replaced with the recommended bolt.

Fuel Filters Are Doing a Better Job

CHAMPION Spark Plug's Service Tips says if you're finding more fuel filters clog lately, don't blame the filter manufacturers. Their units simply are doing a better job of keeping small sediment particles out of the critical passages and valves in modern carburetors.

These small particles, found in almost all gasolines as a result of scale or atmospheric dirt entering the fuel tank, can erode carburetor jets causing an overall loss in performance. When these particles (usually a red or brown talcumlike powder in the sediment bowl) are not removed periodically from the filter, fuel starvation may be noticed with a resultant loss of top speed, pinging or engine surging at high speeds.

A seriously clogged filter may allow fuel to by-pass the filter and permit large quantities of dirt to enter the carburetor. This may result in the carburetor needle valve sticking and causing flooding at erratic intervals.

After the filter is cleaned, momentarily racing the engine will sometimes wash out the accumulated dirt around the needle valve. If this fails, try disconnecting the fuel line on the fuel pump side of the filter and plugging the line. Then, run the engine until the fuel in the carburetor is used up. When the fuel line is reconnected, normal fuel pump pressure will generally flush out the needle valve and seat.

Which Type Spring Do You Have?

A CCORDING TO "Jeep" service news, two different front springs have been used on the Jeep station wagon (two wheel drive models). Early production vehicles had the front (TURN TO PAGE 20, PLEASE)

A REPUTATION FOR





"Save the tough jobs for Scandinavia" is more than a claim. Scandinavia ZT-Molded Combination Sets have earned their reputation in the heavy-duty field. The die-pressed ZT segments have a polishing effect on brake drums which is reflected in a definite reduction of heat-checking and fading. The specially compounded molded segments, combined with ZT, result in dependable braking and long life — even in extra-heavy-duty service.

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less wear means more time on the road - and "MOLY" grease reduces wear

The proof is in - findings of independent research ... major oil companies' tests . . . the experience of hundreds of fleet operators - all agree that "Moly" grease reduces wear.

The reason? "Moly" grease maintains lubrication under the impact of shock loading . . . the wiping action of reciprocating motion . . . water splashing from rain-drenched pavements. The lubricant film provided by conventional grease is broken time and time again by these forces. Then metal surfaces rub together - and parts soon need to be replaced.

"Moly" grease provides full-time lubrication . . means fewer breakdowns... more time on the road.

Climax supplies Molvsulfide® additive to leading oil companies. If you'd like more technical information on greases containing Molysulfide, write Climax.





CANADA



CITIES SERVICE Cities Service Oil Compa Arkansas Fuel Oil Corp. Orange State Oil Co.







Canadian Oil Companies, Limited White Rose Ultra Mely Crease

CLIMAX MOLYBDENUM COMPANY

500 Fifth Avenue, New York 36, N. Y.



"They treat you fine at the Goodyear Sign!"

-where you'll find the best values in TRUCK TIRES to meet every need of Tonnage, Traction and Terrain-from pickup and panel-truck operations, to the biggest over-the-road haulers and earth-movers. All backed by years of experience . . . all expertly serviced at GOODYEAR DEALERS'.





Best buy in

HI-MILER XTRA GRIP Year-round low-cost



SUPER ROAD LUG Powerful off-the-road traction PLUS long. smooth highway mileage

HI-MILER CROSS-RIB Shatters highway tread-wear records

Hi-Miler, Road Lug-T. M.'s
The Goodyear Tire & Rubber Company, Akron, Ohio

"Our 'Midnight Chief'

Motor Cargo, Inc., of Akron,

"More than the equal of crossing the continent." says Owen Orr. President of Motor Cargo, "is the run the equipment makes on our 'Midnight Chief' service between Akron-Cleveland and St. Paul. Minnesota.

"Because each tractor-trailer makes two round trips in 96 hours-practically nonstop.

"That means 3.470-mile hauls of extra-hard driving -sheer torture for tires. Standard treads could take only about 17 of those double-header runs before they were bald.

"But we put Hi-Miler Cross-Ribs to that test. And original tread mileage zoomed to 125,000-130,000better than 36 round trips of this hot-and-heavy run. And even after more than doubling previous mileage. those husky Cross-Rib carcasses are in fine shape for recaps."

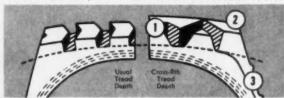
Motor Cargo, whose routes include extensive eastward runs as far as New York, covers 35,000,000 miles a year. In their excellent operating ratio, tire cost-per-mile is a big factor-and Cross-Ribs have helped bring that figure down.

"Cross-Ribs have more than paid their way," concludes Mr. Orr. "There's extra hauling profit in that extra tread!"

You'll hear much the same story about Hi-Miler Cross-Ribs from fleets of all sizes from coast to coast. Why not check with your Goodyear dealeror write Goodyear, Truck Tire Dept., Akron 16, Ohio.

HI-MILER CROSS-RIB:

EXTRA RUBBER plus TRIPLE-TOUGH 3-T NYLON CORD



① 60% thicker nonskid tread! ② Cooler-running tread design. ③ Triple-Tough 3-T NYLON Cord. (Goodyear triple-tempers Nylon cord in an exclusive process involving Tension, Temperature and Time, to make it TRIPLE-TOUGH-for longest tire life, most recaps, lowest cost-per-mile!)

TRUCK TIRES by

doubled tire mileage with Cross-Ribs!"

Ohio, outdistances high costs on a 3,470-mile run





More tons are hauled on Goodyear Truck Tires than on any other kind

New Liquid Cleaner OAKITE

202

Cleans everything . . . economically

A new, "use it everywhere" liquid detergent—Oakite 202—now offers the greatest convenience ever in cleaning. It goes into water solution quickly without waste . . . without fire hazard. You spray, mop or brush it on.

Oakite 202 forms a rich, sudsy solution that's packed with cleaning power. It cuts through road grime, grease, scuff marks—even caked-on bug deposits. Use it throughout the garage. It washes cars and trucks, whitens greasy garage floors and aprons, brightens tile walls and painted woodwork, makes soiled equipment shine. It's safe for any surface, including aluminum. It dries down without streaking.

But-best of all-Oakite 202 in mild solutions out-performs stronger solutions of other cleaners. This makes it a most economical material for garage use.

Ask your Oakite man for a convincing on-the-spot demonstration. Or send for free bulletin to Oakite Products, Inc., 52G Rector Street, New York 6, N. Y.



TRUCKS



Continued from Page 16

spring eyes looped upward. Later production have the eyes looped downward. Spring clips carrying Part No. 644325 were used on the early type springs. Later type springs eyes looped downward use Part No. 921763 spring clips. Whenever replacement is necessary, make sure the correct spring and clips are installed.

Ford Changes Manifold Bolt Torque

PORD REPORTS a change in exhaust manifold bolt torque specifications. On its 1959 Model No. 302 and 332 cu-in. engines torque has been changed from 23-28 lbs ft to 12-15 lbs ft.

A Mechanical Quiz

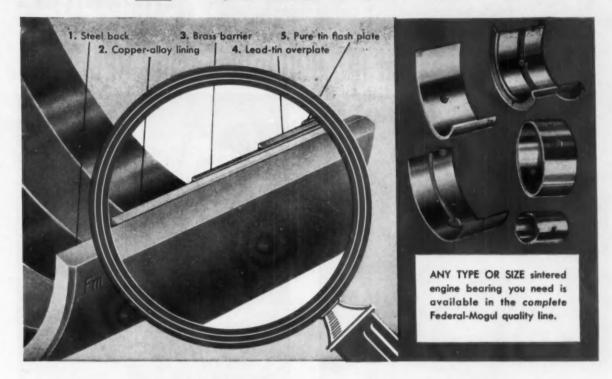
AS A TRUE "nut and bolt" man at heart, you probably have a definite interest in mechanical "sticklers."

Here are some true and false questions that will quickly show your ability in things mechanical. Answer seven questions correctly, you're average. Answer 10 correctly and the boss will probably treat you to coffee for a perfect score. The answers follow.

- A torque wrench will always give you correct tension reading on a bolt or stud.
- Cam angle is that period in degrees of rotation through which the ingition points are open.
- Weak valve springs can contribute to high speed engine miss.
- Lugging an engine can cause bearing failure.
- An operating engine temperature of 120 degrees will contribute to oil dilution and sludge formation.
- 6. A feeler gage will give you the most accurate setting of the ignition points.
- 7. A manifold heat riser valve is designed to provide cool air to the intake manifold.
- 8. Manifold vacuum reaches its peak at wide open throttle.
- Correct generator brush spring tension is important. Too much tension will cause arcing and reduced output. Too little tension tends to cause rapid wear of the brushes and commutator.
- 10. A "hot" spark plug is usually used on equipment subjected to constant turnpike driving or heavy duty operating conditions.

(TURN TO PAGE 24, PLEASE)

Better products, faster, from your Federal-Mogul jobber:



Federal-Mogul builds this bearing in 5 layers so fleets clock more miles between overhauls!



Sintered copper-alloy engine bearings and bushings pay you dividends in longer life, lower maintenance costs!

On its surface, a Federal-Mogul sintered copper-alloy engine bearing looks simple. Underneath, you see this complex marvel of research, design, engineering and production—made by a patented process to deliver a big bonus in fleet mileage.

Five separate layers make up each sintered bearing: 1. Steel back provides strength and bond; 2. Finely powdered alloy of copper for strength, and lead for softness is sintered to make the prime bearing surface; 3. Brass barrier assures lining stability; 4. Lead-tin overplate protects bearings and shaft during break-in; 5. Pure tin flash-plating resists corrosion.

Longer life, less maintenance—that's why fleet owners prefer Fm sintered bearings 2 to 1! Your Federal-Mogul jobber gives fast delivery on the size or undersize you need. Call him today!

FEDERAL-MOGUL ENGINE BEARINGS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.,

DETROIT 13, MICHIGAN



ENGINEER'S FIELD REPORT

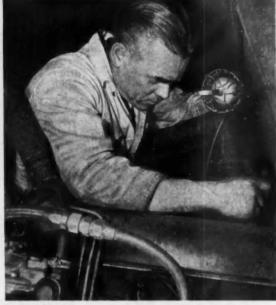
PRODUCT RPM DELO SPECIAL OIL

Gray Line Sightseeing Tours Salt Lake Transportation, Inc. FIRM Salt Lake City, Utah

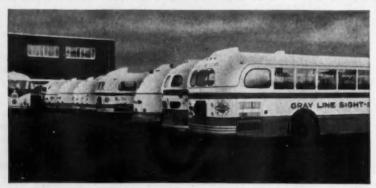
Only .001" wear in 150,000 miles using RPM DELO



RPM DELO Special Lubricating Oil helps Gray Line Tours of Salt Lake Transportation, Inc. withstand punishing low-speed operation required in sightseeing. After more than 150,000 motor miles at 5 to 10 miles per hour, this GMC piston (above) is still usable—shows less than .001 inch wear.



Lead Mechanic Jay Fulmer (above) says, "RPM DELO Special keeps our engines really clean. When we open them up there's no sludge...rings are never clogged. It ended our bearing troubles, too. This GMC 503 has run more than 270,000 motor miles and still has original rod and main bearings!"



Gray Line Fleet consists of 22 Crown, Flxible and Gillig buses, ranging from new to 10 years old. Running at an average speed of 5 to 10 miles per hour, with lots of idling, buses get hardest use carrying sightseers during tourist season. In winter they carry

RPM DHLO

skiers to resorts at Brighton and Alta. High altitudes, engine compression-braking, heavy loads all add to engine lubrication problems, yet RPM DELO Special Oil keeps engines in good condition with minimum wear. Firm has used RPM DELO Special since 1947.

TRADEMARE "RPH BELO" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey

Why RPM DELO Special Oil reduces wear—prolongs engine life

- Metal-adhesion qualities keep oil on engine parts, running or idle
- Anti-oxidant resists formation of lacquer
- Detergent keeps parts clean
- Special compounds prevent corrosion of bearing metal
- Inhibitor resists foaming



For More Information about this or other petroleum products or the name of your nearest distributor, write or call any of the companies listed below.

STANDARD OIL COMPANY OF TEXAS, El Paso The California Company, Denver 1, Colorado

BISTRIM Q and A Bulletin



Helpful information on the use and selection of suspension seats

Questions which follow are ones frequently asked about Bostrom "Level-Ride" 80 Seats. You may find the answers useful in your consideration of suspension seats for your trucks.

Q: Do I need suspension seats in trucks which are driven on relatively short runs?

A: Many short haul jobs, such as construction materials delivery, quarry and cement trucking, need suspension seats because of rough rides and frequent off-the-road operation. In addition, a good rule to follow is to evaluate the effect of truck-driving fatigue on drivers' relations with customers. Fatigue causes irritability, and can adversely affect customer relations. Thus, when drivers contact customers, they benefit from the smooth, fatigue-reducing ride "Level-Ride" 80 Seats give them. For example, city pickup drivers, fuel truck drivers, and many others, not only experience rough riding, but also need to maintain their good dispositions with customers. Then it certainly pays to give drivers Bostrom "Level-Ride" 80 Seats.

Q: On longer runs, won't drivers get sleepy if the ride is too easy?

A: Certainly no more so than if you put drivers into passenger cars. Actually, what makes drivers sleepy is fatigue—and fatigue is one of the results of a bouncing, vibrating ride on a non-suspension seat. Riding on a Bostrom "Level-Ride" 80 Seat reduces fatigue—helps drivers keep awake and alert—makes them safer drivers, too.

Q: How do you arrive at "5-times-better ride" on a Bostrom "Level-Ride" 80 Seat?

A: This measurement is done in Bostrom laboratories and on field tests with electronic testing equipment. An ordinary seat and a Bostrom "Level-Ride" 80 are mounted side by side, and subjected to identical vibration and road shock conditions. Electronic controls, attached to each rider, measure the degree and rapidity of rider movement. Electronic impulses show that, on an average, 80% of vibration, jolts and jars are removed from the "Level-Ride" 80 Seat rider. He is subjected to one-fifth the vibration and shock experienced by the ordinary seat rider—thus obtaining a 5-times-better ride.

Q: What is meant by the term "human engineering" applied to Bostrom "Level-Ride" 80 Seats?

A: Before Bostrom seats became popular, truck seats were designed to fit the vehicle, not for the driver. Bostrom changed this concept by designing a seat to fit the man. Not only is road shock engineered out of a "Level-Ride" 80 Seat, but also the seat is adjustable to the individual driver's exact comfort requirements.

Q: How many comfort adjustments are possible with "Level-Ride" 80 Seats?

A: Most important is adjusting the suspension system to the weight of the driver—with a range of 150 to 275 pounds. This must be done to insure the best possible ride for each driver. In addition, seat cushion depth is adjustable; seat back can



be set at one of three different positions; rear of cushion may be raised or lowered; seat may be moved fore or aft along a 4-inch ball bearing slide.

Q: What new developments have been incorporated into "Level-Ride" 80 Seats?

A: An improved model of the "Level-Ride" 80 Seat includes a built-in shock absorber which levels out the ride on extrarough roads—overchuck holes, bumpy railroad tracks, detours, and around loading docks, etc. This improved seat also has a contour back for added driver comfort.

Q: Who endorses and uses Bostrom "Level-Ride" 80 Seats?

Ar Every truck manufacturer endorses and offers "Level-Ride" 80 Seats—Autocar, Brockway, Cook, Chevrolet, Dart, Diamond T, Dodge, Duplex, Federal, Ford, FWD, GMC, Hayes, Hendrickson, International, Kenworth, Leyland, Mack, Oshkosh, Peterbilt, Reo, Walter, Ward LaFrance, White, White Freightliner. Among truck fleets, the user list is long and impressive—includes haulers such as Akers, Briggs, Consolidated, Gulf Oil, Motor Cargo, Olson, P.I.E., Spector, Yellow Transit, and many others.

For additional information, or for parts and installation instructions, see your dealer or write Bostrom Corporation.

> Visit us at the ATA Convention Hospitality Room 2223, Biltmere Hetel, Los Angeles



BOSTROM CORPORATION

133 West Oregen Street • Milwaukee 4, Wisconsin



pany follows the most advanced engineering practice in reducing maintenance and repair costs. In reconditioning aluminum upper crankcases of gasoline engines, his company uses Hell-Ceil Inserts... with major savings.

Mr. Connors writes:

"For permanently repairing worn and stripped threads in 116 holes in each casting with Heli-Coil Stainless Steel Inserts it costs us only \$85.00 per engine—including labor. That's a big saving over the \$400.00 it would cost for a convention." new casting.

Hell-Coll Stainless Steel Inserts may offer you comparable sayings. They are stocked nationally by automobile and industrial distributors. Write for full information and distributor list.

*Reg. U. S. Pat. Off. **HELI-COIL CORPORATION** 3910 SHELTER ROCK LANE, DANBURY, CONN.

in Canada: W. R. Wathins Co., Ltd., 41 Kipling Ave., S. Toronto 18, Ont.

Brochure



5 MONEY-SAVING WAYS "BLUE CHIP" CARRIERS OF PERISHABLES USE RYANS

Learn for yourself the 5 money-saving ways that accurate, tamper-proof Ryan records of temperatures in-transit help "blue chip" carriers get and keep business from shippers of perishables. Write Ryan at 847 Poplar Place, Seattle 44, Wash.





ENGINES



Continued from Page 20

Here are the answers to the quiz on page 20.

- 1. FALSE. Damaged threads give a false read-
- 2. FALSE. The points are closed.
- 3. TRUE. They cause late valve closing and
- 4. TRUE. Lugging puts a heavy load on bearings.
- 5. TRUE. Fuel will not vaporize completely and water will condense in the engine.
- 6. FALSE. A cam dwell meter gives the most accurate setting.
- 7. FALSE. It deflects hot exhaust gases around the intake manifold during the warm up
- 8. FALSE. Generally, peak vacuum is at idle.
- 9. FALSE. Too much tension causes rapid wear. Too little causes arcing.
- 10. FALSE. Usually under these conditions "cold" plugs are used.

Correcting Dodge Engine Noise

ODGE SERVICE reports on a loud tapping noise or knock in its 1959 326 cu-in. V8 engine during idle. This condition may be caused by the oil pump suction screen striking the bot-(TURN TO PAGE 28, PLEASE)







The EMERGENCY BRAKE thats meets all New State Requirements!

The
PARKING BRAKE
that meets all I.C.C.
that meets all State
as well as all State
Requirements!

Rosal Airo-Mech is the Best and costs the Least!

Airo-Mech STOPS YOU! Airo-Mech HOLDS YOU! Because it is a SPRING BRAKE (requiring no Air to apply the brakes) the Berg Airo-Mech works AUTOMATICALLY as an emergency brake should there be any air pressure failure.

The Airo-Mech also works MANUALLY to give you a parking brake (which when properly installed) is capable of "holding any load on any grade."

Engineered to prevent brake drag. Safe will not "Booby Trap"! 3 Models Available —

will meet any axle or braking requirement.

Installation is Simple— Airo-Mech may be installed on any make or model vehicle—Can be axle or frame mounted.

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MANUFACTURING & SALES COMPANY

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Manufacturers of Brake and Electrical Safety Equipment For the Truck, Bus, Tractor and Trailer Industry

McQUAY-NORRIS PHOSALLOY is the answ

for Heavy-Duty Piston Rings for Truck and



PHOSALLOY...

Another McQuay-Norris exclusive! A special electric furnace alloy that gives McQuay-Norris heavy-duty rings unusual tension-retaining qualities! And that's not all. Top rings are chrome plated. Oil rings include special cam-shaped, pre-lapped steel rails-Chrome-Armored for unusually long wear. Here's what it means to you: the most reliable heavy-duty piston rings available anywhere!

CHROME CONTROL



the most Power-Packed rings in the world!

LIPE FACTORY-EXCHANGE CLUTCHES Cut Shop Time, Boost Profits



"Deadlined trucks were losing money, while we rebuilt our own clutches. But neither our shop, nor that of any field rebuilder could match the original specification quality which Lipe furnishes us in its Factory Exchange Clutches. Lipe Exchange Clutches carry a new-clutch guarantee . . . compare with new in everything but price — that's 25-30% lower. Now we get delivery right off the jobber's shelf. No waiting for parts or

delivery . . . no unnecessary downtime for our trucks."

Now! Switch to LIPE... Get core-credit for other make clutches

Lipe now offers the broadest core-credit program in the industry. Your Lipe Jobber can help you change your trucks over to Lipe Factory-Exchange Clutches, with allowances for Lipe and many non-Lipe clutch cores. Call him for full details.



• This little red and white tag is your sign of quality. Look for it on every replacement clutch. It's your assurance that you're getting the genuine Lipe Clutch with long, trouble-free life, and big, long-run savings.



COLD ENGINES START INSTANTLY!



with PERFECTION heaters

Here's low-cost, cold-weather protection for liquid-cooled engines of every kind. With the Perfection 590 coolant heater, you get instant starting and smoother operation of all types of trucks or engine-driven equipment used or stored out of gasoline-fired heater delivers a full 12,000 BTUH, is easily installed and operates entirely free of the engine with a choice of manual semi-automatic, or fully-automatic controls

Proven in thousands of installations, the 590 can pay for itself many times over in prolonged equipment life, dependable starting, and less downtime for maintenance caused by engine failures due to cold. Write today for Catalog No. 590.

Distributor Inquiries also invited.



MOBILE PRODUCTS Perfection of HEDP CLEVELAND 10, ONIO

CLEVELAND 10, OHIO

COAST



POWER HYDRAULIC CONTROLS

lift and lower snow plows automatically!

Snow removal is easier, faster, more economical. See your dealer or write for illustrated folder.





1331 Michigan St., N. E. Grand Rapids 3, Michigan

FLEET CARS



Continued from Page 24

tom of the oil pan. Generally, this noise is governed by engine temperature and usually does not occur at idle speed until the car has been operated for a considerable period of time.

Here's the cure. Drain the engine oil. Now provide clearance between the oil pump screen and the oil pump. Use a long screwdriver or a similar tool.

Safety Rules for Handling "Freon"

CHEVROLET Bulletin says "When using or storing Freon containers, there are five import rules to remember:

- (1) Never heat a cylinder above 125 deg F.
- (2) Never apply a direct flame to a refrigerant cylinder.
- (3) Never place an electric resistance heater in direct contact with a refrigerant cylinder.
- (4) Never drop, dent, or otherwise abuse refrigerant cylinders.
- (5) Never store refrigerant cylinders in areas where the temperature might exceed 125 deg F.

"Tests have proven that as the temperature of a cylinder increases, the cylinder pressure will increase at a moderate rate. For example, the cylinder pressure of 'Freon 12' is 70 psi at 70 deg F and 160 psi at 120 deg F. This is an increase of 90 psi with a temperature increase of 50 deg F. However, if the cylinder should be heated further and become filled with liquid, the pressure will increase very rapidly and a hazardous situation will develop.

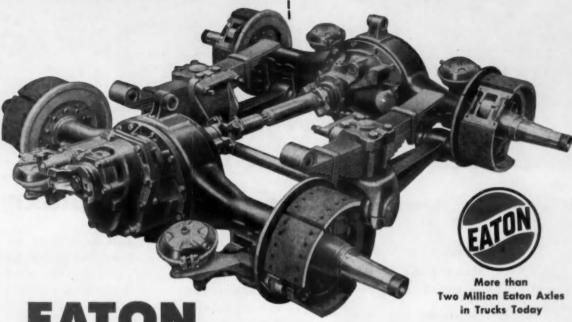
"All 'Freon 12' cylinder valves contain a plug of low-melting alloy designed to soften at 157 deg F and melt completely at 165 deg F. In addition, the nominal 154-lb cylinder contains a similar fusible plug in the bottom. The purpose of the low-melting alloy plug, however, is to protect the cylinder in event of fire. It is not designed to protect the cylinder from gradual overheating.

"A cylinder containing 145 lb of 'Freon 12' when heated above 130 deg F, will become liquid filled. When liquid refrigerant completely fills a cylinder, the usual pressure temperature relationship no longer applies. Continued heating of the cylinder causes extremely high pressures to develop. This pressure builds up rapidly with each degree of temperature rise. Low-melting alloy plugs will not relieve this pressure. The high pressure developed at the melting point of the alloy plug is far in excess of cylinder test pressure."

30D SERIES

42D SERIES

Two New Additions to the Expanding Line of



EATON
TANDEM AXLES

Provide Famous Eaton Design in a Wider Range of Sizes

Two new Eaton Tandem Axle models now extend the line of famous Eaton Tandems into a much wider range of vehicle capacities—from 38,000 lbs. GVW to 55,000 lbs. GVW.

Eaton Tandem Axles offer advantages not available in other tandems. Included are important savings in weight and over-all length with no sacrifice of stamina. These operation-proven axles may be selected

from Single Speed, 2-Speed, and Double Reduction types. The 2-Speed and Planetary Double Reduction models provide the many advantages of Eaton's exclusive planetary gearing design—substantiated by billions of miles of economical, trouble-free service.

Ask your truck dealer to explain the 10 big benefits you get with Eaton Tandem Axles—and how they can make your hauling operations more profitable.

EATON

MANUFACTURING COMPANY
CLEVELAND, OHIO



"Simple and Safe...that's the Simplex!"

says G. D. Joyner

Vice President

R-C Motor Lines, Columbia, South Carolina

"In actual road service, they proved just that."

"Simplex Wheels looked good to us from the first, but only actual road service can tell you how good a 5th wheel really is. So, about three years ago, we put Simplex Wheels on a few trucks and watched them closely for several months. As a result, our last one hundred 5th wheels have been Simplex.

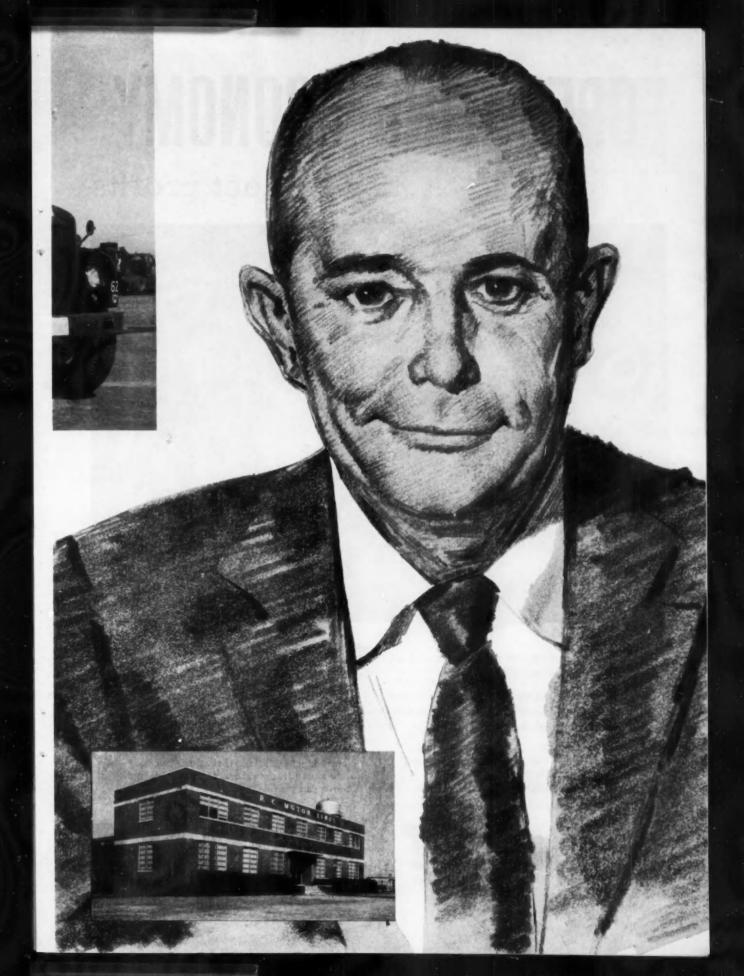
"We like these wheels for many reasons, espe-

cially the mechanical simplicity that makes them couple and uncouple so swiftly and easily. We also like the rubber-cushioned rocker arm that soaks up shocks and saves us money in reduced damage to loads and equipment. A very good safety factor is still another point in favor of Simplex. We find Simplex to be a satisfactory 5th wheel in every way."

1 1 1

The same decision has been arrived at in the very same way by many other truckers the country over. Why not put on a "show me" test of your own? Contact your local Simplex distributor or write direct to Simplex 5th Wheel, American Steel Foundries, Hammond, Indiana.





OPERATING ECONOMY

... key to fleet profits



Piston ring performance makes an important difference in cost per ton-mile.

Fleet operator preference for Perfect Circle is based on fleet tests and operating records that prove PC rings deliver

Consistently excellent initial performance Reduced ring drag...sustained horsepower... conservation of fuel and oil Long effective life...low ring cost per mile Other reasons why leading fleet operators say PERFECT CIRCLE all the way!

Power Service products that simplify maintenance operations, economically extend engine life.

Information Services provided through Doctor of Motors Clinics and specialized fleet technical assistance.

New Product Leadership that assures customers of the most advanced products progressive engineering can provide.

PERFECT

PISTON N



CIRCLE

POWER SERVICE PRODUCTS

In Canada: Don Mills, Ontario

Hagerstown, Indiana

COMMERCIAL CAR JOURNAL, October, 1959



OCTOBER 1959 FLEET HIGHLIGHTS as reported by Commercial Car Journal

Subcommittee Revises Container Length Proposals

New container length standards—if approved—are going to put the squeeze on states with less than a 40-ft trailer length limit. A sub-committee of American Standards Assn.'s Container Committee revised it's length proposals made in February. Sticking to height and width of 8 by 8 ft, it now asks for standard lengths of 10, 20, 30 and 40 ft. Recommendations for 12, 17, 24 and 35-ft lengths were dropped. It also asked for regional standards for western states of 26 ft 6 in. and 13 ft 3 in. in length. These are to fit the overall combination length of 65 ft allowed in most western states. Note that one of each of these would total 39 ft 9 in. to fit a 40-ft trailer chassis—providing locking mechanisms were available. Parent committee—MH-5 Container Standardization Committee—meets late this month to consider the recommendations.

Will New Driver Hour and Mileage Regs Affect You?

New safety regulations setting stringent limits on driver hours of service and MILEAGE were—at press time—still scheduled for hearing next month. (Full text of the proposals appears on page 186, June issue.) Truck association men are alarmed at lack of response from fleet operators. They feel much truck operation will be unnecessarily crippled by the new rules. But they need your comment to support such a view before the Interstate Commerce Commission. COMMERCIAL CAR JOURNAL is assured by both American Trucking Assns. (1424 Sixteenth, N.W., Washington, D. C.) and Private Truck Council of America (Sheraton Bldg., Washington 5, D. C.) that they still want to hear from you.

Rear Lights Need Attention

Just-released statistics from the Interstate Commerce Commission and the Inter-Industry Highway Safety Committee show one out of three trucks have rear light defects. In latest ICC safety check, almost 3 out of 10 trucks and tractors and 3 out of 10 trailers were tagged for tail light and/or stop light defects. The Committee's report, based on the 1959 National Vehicle Safety-Check, says 31 per cent of trucks checked needed rear light attention.

Tire Cord Prices Drop as Truck Tire Prices Go Up

Hot on the heels of DuPont's cut in nylon tire cord prices (Sept., page 51), comes a cut in Tyrex (new viscose cord developed by rayon manufacturers) prices. However, truck manufacturers were told by tire makers first of this month that original equipment truck tire prices would be boosted 3 to 5 per cent. Reasons given were 10¢ an hour wage increase for rubber workers, climbing natural rubber prices. Likely to come are increases in replacement tire prices for both trucks and passenger cars.

DETROIT DISPATCH

NEW PARKING brake Reg by ICC (July, page 146) has caused some confusion. First, don't panic. You have until the end of the year to comply. Second, it doesn't outlaw parking brakes that met the old rule. New rule does permit use of newer type parking brakes, however. Basic point; Just be sure the brake you do use meets the new wording.

REEFER FLEET operators should soon be able to match rated trailers with rated refrigeration units. Air-Conditioning and Refrigeration Institute has just released a rating standard for the type used on most trailers (see page 113, this issue). A second standard is in the works to cover units commonly used on straight trucks.

GAS TURBINE ENGINE. now in the hands of General Motors, Allison Division, is being road tested in a Chevrolet truck. Fuel consumption of the Model No. GT-305 Turbo-Titan II engine is reported 25 per cent less than the first experimental unit—with 12.5 per cent more power.

small trucks with unitized bodies seem to be in the works. Ford last month confirmed rumors that it will produce at least a pick-up truck patterned after its small car, the Falcon. (For details on the Falcon and other 1960 model cars, see page 119, this issue.)

WHITE, TOO, IS in the small truck act. It bought last month Montpelier (Ohio) Mfg. Co. Montpelier has been producing a successful light multi-stop truck with unitized body, 104-in. wheelbase and 4-cyl engine (Nov. '58, page 67).

SCHOOL BUS FLASHING signal lights can be made more visible in daylight by surrounding the lights with a small area of black. Suggestion results from recent tests by Automobile Manufacturers Assn. and Society of Automotive Engineers.

LATEST VERSION OF Chrysler's gas turbine engine will be tested in a 14,000-lb GVW Dodge truck under a research and development military contract. Earlier version of the same engine, says Chrysler, made the trip

WASHINGTON WATCH

EXCISE TAXES EARMARKED for the Highway Trust Fund in last month's law that also hiked the federal fuel tax 1¢ a gal (Sept., page 49) may not get there. The Administration is against it, hopes the law will be changed before the July 1, 1961, effective date.

AMERICAN TRANSIT ASSN. met last month, elected W. E. P. Duncan as its president for the coming year. He's general manager of subway construction, Toronto Transit Commission. Fifth Avenue Coach Lines' John E. McCarthy was elected vice president. C. Frederick Rogge of Public Service Coordinated Transport (N. J.) becomes treasurer.

COMMUNITY RELATIONS FOR truck fleets is the subject of a new manual just released by American Trucking Assns. Walter Belson, ATA Public Relations Director, says it shows fleet operators what can be done toward "nail-

ing down our industry's place in the sun." ATA says it's available to any firm in the trucking industry . . . just write Don O'Connor, Community Relations, American Trucking Assns., 1424 Sixteenth St., N.W., Washington 6, D.C.

NEW PIGGY-BACK ANGLE IS being tried by North American Car Corp. and Emery Transportation. They've formed a new company, North American-Emery Corp., to supply shippers with 85-ft flatcars and 40-ft reefer trailers. By supplying their own rail cars and trailers, shippers can then take advantage of the new rail flat rate of 42¢ a mile between Chicago and the west coast.

CHEVROLET'S TRIBUTE to the trucking industry on the Chevy Show over TV last month marked the company's third annual renewal of its support of the ATA Foundation . . . to the tune of \$86,000.

from Detroit to the east coast installed in a '59 Plymouth, averaged 19.39 mpg of diesel fuel at an average speed of 38.3 mph. On the return trip, using alternately equal amounts of diesel fuel, military JP-4, unleaded gasoline and regular gasoline, the average fuel consumption was 17.17 mpg at an average speed of 51.65 mph.

ALUMINUM ENGINE RESEARCH continues. Latest is announcement by Alcoa of four experimental aluminum hard-facing alloys. At 500 deg F, says Alcoa, the hardest is four times as hard as commercial aluminum piston compositions.

NEW 4-CYL OVERHEAD VALVE ENGINE is announced by Divco. Especially designed for multi-stop use, it's rated 80 hp at 3500 rpm, has 193-cu in. displacement and 7 to 1 compression ratio. Features include positive rotation for intake and exhaust valves, Stellite facing on valves and seats, three main bearings on fully counterbalanced crankshaft, aluminum alloy pistons.

RYDER IS discussing another king-size merger. This time with Pacific Intermountain Express. If it goes through the combined fleet should have annual gross revenue of over \$118 million. A similar proposal that would have tied Ryder System and Consolidated Freightways together was discussed last year, did not materialize.

IF YOU MAKE sales in a state where you do not maintain a regular place of business, that state cannot tax you on income from such sales. This, in brief, is the effect of new federal law passed last month. It, however, does not completely clarify the situation in respect to interstate motor carriers. Watch for further Congressional action—probably in the 1962 session.

GOT TROUBLES reading package markings? You have a new "chaplain" to take them to. It's the Proper Marking Assn., Box 537, Carbondale, Ill.

TRUCK TONNAGE

VOLUME OF intercity freight hauled by truck in July this year was 18.9 per cent ahead of July, 1958, reports American Trucking Assns. Research Dept. Although July tonnage was down 4.2 per cent from the previous month, tonnage for the first seven months of 1959 averages 20.1 per cent ahead of the first seven months of 1958.

Menth	% Change from Previous Month	% Change from a Year Age		
July, 1959	- 4.2	+18.9		
2nd Quarter '59	****	+20.5		
June, 1959 May, 1959 April, 1959	+ 4.2 - 1.1 + 1.9	+21.6 +20.4 +25.2		
1st Quarter '80		+15.6		
March, 1959 February, 1909 January, 1969	+13.2 - 2.2 + 2.7	+25.0 +17.6 +11.7		
Full Year, 1958	****	- 1.1		
4th Quarter '58	****	+ 6.2		
December, 1958 November, 1958 October, 1958	+ 3.3 -10.1 +11.3	+17.4 + 0.8 + 3.2		
3rd Quarter '58	****	- 2.1		
September, 1958 August, 1958 July, 1958	+ 0.2 - 2.4	+ 2.3 - 6.8 - 0.3		

SECOND QUARTER totals

crease over the second quarter, 1958—up 20.5 per cent. They put the ATA second quarter tonnage index at a record high of 210, well over the previous high of 182 registered in the second quarter of 1956. (For regional and commodity details, see page 180.)

TRUCK AND BUS PRODUCTION

	Weeks	Ending	Year to Date			
	Sept. 19	Sept. 12	1959	1956		
Chevrolet	5,282	3,937	265,700	188,857		
G. M. C.	801	366	62,902	42,683		
Diamond T	82	52	4,298	3,900		
Divce	80	64	2,676	2.016		
Dodge and Fargo	1.134	844	56,749	39,924		
Ford	5,923	1.686	244.847	150,892		
F. W. D. Corp.	28	20	771	931		
nternational	2.942	2.318	105,994	68.271		
Vlack	390	311	12,916	10.78		
itudebaker	159	196	10.081	8.77		
White	440	371	14.503	11.79		
Willys	2.534	1 927	84,154	61 101		
Other Trucks	70	65	2,723	2,23		
Total-Trucks	19,885	12,157	866,319	508,160		
Buses,	36	32	1,698	2,446		
Total-Trucks and Buses	19,901	12,188	870.017	590,606		

Source: Automobile Manufacturers Association

IN THIS ISSUE

SAFETY gets the emphasis. Here's how. . . .

. . . to PREVENT ACCIDENTS, by Don Buck, page 88 . . . a BUS FLEET boosts traffic with safety, page 94 . . . SHOP FIRE losses can be cut, page 96

. . . plus NEW PRODUCTS for safe operation, page 198

There are three timely REFRIGERATION reports. the new reefer unit RATING STANDARD, page 113

... Hormel's fresh meat CONTAINERS, page 114
... PIE's DIESEL-POWERED reefers, page 116

For PASSENGER CAR fleet operators. . . .

. . . a complete description of the 1960 models, including the brand new names—Corvair, Falcon, Valiant and Dart, page 119



A QUICK LOOK AT WHAT'S COMING TO HELP WITH YOUR ADVANCE FLEET PLANNING

REFRIGERATED FOOD CARRIERS will be able to see a lot of fleet equipment applying to their business at the 11th annual Exposition of the Air-Conditioning and Refrigeration Industry. It's scheduled for Nov. 2-5 in Atlantic City, N. J. Special feature this year will be a series of "conference sessions" on Nov. 3 where new developments in truck refrigeration as well as other fields will be discussed.

WHAT'S NEW IN automotive parts and accessories and shop equipment? Two shows scheduled for next year will give fleetmen a chance to see. First is scheduled for Jan. 30-Feb. 3, 1960, at the Shoreham Hotel, Washington, D. C. It's the NADA 1960 Equipment Exhibition to be held in conjunction with National Automobile Dealers Assn. annual meeting.

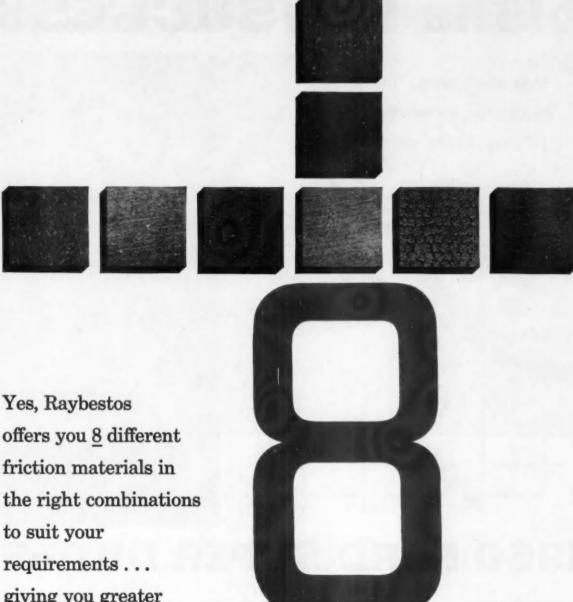
FLEET MAINTENANCE EXPOSITION IS the title given the second show. Sponsored by the Private Truck Council of America, it's scheduled for Oct. 24-27, 1960, in New York City's Coliseum. In addition to exhibits of parts, accessories and shop equipment, a series of maintenance workshop seminars are planned.

MORE FLEET LEASING? One reason for a "Yes" answer is the continued high interest rates on borrowed money. Some fleets are choosing to "rent" rather than borrow money for new equipment purchases. Says American Automotive Leasing Assn., there's been a 14 per cent gain in passenger car leasing by industries (not including daily rentals) in the past 12 months. Association sees the present industry passenger car fleet as totalling one million cars—about one-fourth leased, one-fourth in company-owned fleets, one-half salesman-owned.

"BOUNCE" AND "WHEEL HOP"—or more properly speaking, Road Loading Mechanics are under study by Bureau of Public Roads. It wants to know what damage they do to highways. Results will also help makers design vehicles with better riding characteristics—more driver comfort, less cargo damage. One cryptic point made in a preliminary report: Studies show wide variation between characteristics of vehicles weighed in motion as compared to those weighed on platform scales. Such a statement needs watching. It could mean present gross weights have more impact on highways than is presently thought, lead to demand for decreasing present weight limits.

RECORD TRUCK registration is expected for 1959—some 11,825,000 for a gain of 3.5 per cent over 1958. When it comes to truck sales, H. P. Sattler of Chevrolet says they've been running 35 per cent ahead of last year, should close the year at 970,000 units. He predicts over a million new truck registrations in 1960. And by 1970, says W. Chase of Ford, annual demand should be around 1,450,000 trucks. Meanwhile, here are the July totals:

In thousands of units, except bus safee are in action numbers 7 July Months								- 1	Truck and Bus Tires					
			Truck Factory Sales - Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Replacement Shipments		Original Equip. Shipments		Inven-	
	July	7 Months	July	7 Months	July	7 Months	July	7 Months	July	7 Months	tery End of July			
1959	88.9	558.3	92.2	845.5	6.1	42.3	209	1390	843.5	5544.9	399.9	2907.4	3023.2	
1958	64.3	411.0	50.5	396.7	4.1	26.8	290	1771	940.0	4905.8	264.8	1910.3	3114.3	



offers you 8 different friction materials in the right combinations to suit your requirements . . . giving you greater safety, longer block wear, and better drum life at a lower cost per mile ... no matter what your equipment or where you operate.

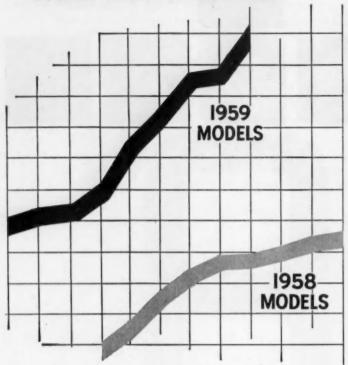




RAYBESTOS DIVISION of Raybostos-Manhattan, inc., BRIDGEPORT, CONN. RAYBESTOS-MANNATTAN, INC., Brake Lining * Brake Blocks * Brake Fluid • Clutch Facings • Industrial Rubber • Mechanical Packings • Asbestos Taxilise • Engineered Pisatics • Sintered Metal Products • Rubber Covered Equipment . Laundry Pads and Covers . Abrasive and Diamond Wheels

The BIG SUCCESS

1959 FORD SUPER DUTY
TRUCK SALES MORE THAN
DOUBLE THOSE OF LAST YEAR





1960 FORD SUPER DUTIES

SKYROCKETING SALES OFFER ADDED TESTIMONY TO THE TOUGHNESS AND RELIABILITY OF FORD "BIG V'S"—NOW THEY'RE MORE DURABLE, MORE FLEXIBLE THAN EVER!

Ford's increase in sales of Super Duty Trucks, while impressive in itself, by no means tells the whole story. Over half of the 1959 unit sales, were the result of repeat orders from operators like Trucking Contractors, Inc., who bought because the Ford "Big V" provided the kind of performance and durability needed for their work.

And for 1960, the Ford Super Duties offer additional refinements designed to provide an even greater degree of dependability. Bigger optional axles and increased GVW's permit greater payloads and more profitable operation. Automatic radiator shutters to keep the engine temperatures within the most efficient operating range, submerged-type electric fuel pump to prevent vapor lock, and redesigned wiring for longer, more dependable operation are but a few of the improvements which add to the performance and durability of these units.

The changes offered for 1960 were tested and evaluated by America's foremost independent automotive research organization. The certified results of the studies by this impartial firm (name available on request) provide proof that Ford's Super Duty Trucks are even more dependable.

• Certified Durability through closer temperature control! Independent research engineers certify that Ford's thermostatically controlled radiator shutters kept water temperature between 168° and 188° in severe mountain grade operation. The test truck with shutters blocked open

of the Big Truck Field



"Tried 8 in '58—bought 20 more in 1959," says Curtis E. Brost, President, Trucking Contractors, Inc. "In 1958 we bought 8 Ford T-850's with lightweight chassis options and specially built 5-batch bodies which gave us a full extra batch per truck. A 5-batch load is a real strain on the truck when you consider we're 'running the ditches' on this highway paving job in North Dakota. These T-850's worked

out so well that we ordered 20 more in '59. Our Ford Tandems with the 477 engine give us good mileage and the drivers are real happy with them. It's a rough go on trucks with soft footing and dust so bad we have to drive with headlights on. Despite such operating conditions, downtime has been negligible and these '477' Fords have given us less trouble than other trucks we have operated."

with Certified Durability

under same operating conditions had a temperature range from 102° to 181°. The temperature variation of only 20° with shutters means less expansion and contraction in engine block and cylinder heads. Higher temperatures with radiator shutters permit leaner fuel-air mixtures with less possibility of raw gas washing down cylinder walls. Warm oil circulates more freely, reducing internal friction. All these factors contribute to longer engine life.

 Certified Dependability with longerlived electrical system! Ford's '60 improved wiring harness and the 1959 wiring harness were subjected to shaker table tests plus constant exposure to oil and water vapors and temperatures of 200°. Certified results prove that the greater resistance to deterioration by heat, oil, water and abrasion obtained with the 1960 wiring harness more than doubles wiring harness life.

 Certified Reliability with Ford's submerged-type electric fuel pump!
 Dynamometer tests of engines with submerged-type electric fuel pump and conventional mechanical type showed that vapor lock was nonexistent with Ford's electric pumps at temperatures up to 200°, whereas incipient vapor lock with mechanical pump resulted in a power loss of 9% at an underhood temperature of 200°.

Test results like these plus the experience of satisfied users are important but that is not all. For 1960, the Super Duty line has been broadened to provide even more flexibility in power train options. Get the facts from your Ford Dealer!

FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . BUILT TO LAST LONGER, TOO!



"KIM HOTSTARTS keep us ready to roll"

Like The Washington Water Power Company, KIM HOTSTART engine preheaters will keep your equipment ready to go when the temperature is low. KIM Hotstarts plug into electric circuit when trucks are idle, draw off cold water, heat it, and circulate it back through the engine. High corrosion resistance. Fits gas or diesel engines. See your automotive supplier or write to us....

KIM HOTSTART MFG. COMPANY
West 917 Broadway Avenue Spokane 1, Washington





DATES and DOINGS

OCTOBER

- 18-24-American Trucking Assns., Annual Convention, Statler and Biltmore Hotels, Los Angeles, Cal.
- 19-23—National Safety Congress and Exposition, Commercial Vehicle and Transit Safety Sessions, La Salle Hotel, Chicago, Ill.
- 20-22—Sixth Annual Conference on Lubrication, sponsored by the American Society of Lubrication Engineers and the American Society of Mechanical Engineers, Sheraton-McAlpin Hotel, New York City.
- 25-28-National Lubricating Grease Institute, 27th Annual Meeting, Roosevelt Hotel, New Orleans, La.
- 26-28—Society of Automotive Engineers, National Transportation Meeting, La Salle Hotel, Chicago, Ill.
- 27-28-Society of Automotive Engineers, National Diesel Meeting, La Salle Hotel, Chicago, Ill.
- 28-30—Society of Automotive Engineers, National Fuels and Lubricants Meeting, La Salle Hotel, Chicago, Ill.
- 28-30-Automotive Parts Rebuilders Assn., 12th Annual Convention and Trade Show. Hotel Roosevelt, New Orleans, La.

NOVEMBER

- 2-5-Air-Conditioning and Refrigeration Institute, 11th Exposition, Atlantic City, N. J.
- 2-5-Automotive Warehouse Distributors Assn., Annual Convention, Muchlebach Hotel, Kansas City, Mo.
- 10-11—Short Haul Carriers Section, Local Cartage National Conference, American Trucking Assns., Fall Meeting, Somerset Hotel, Bacton, Mass.
- 16-19—International Soft Drink Industry Exposition, sponsored by American Bottlers of Carbonated Beverages, St. Louis,

DECEMBER

- 8-9—Cartage, Assembly & Distribution Section, Local Cartage National Conference, American Trucking Assns., Congress Hotel, Chicago, Ill.
- 13-16-The Materials Handling Institute, Inc., Annual Meeting, Savoy-Hilton Hotel, New York City.

JANUARY 1960

- 16-24—Chicago Automobile Trade Ason., 52nd Annual Chicago Automobile Show, International Amphitheater, Chicago, Ill.
- 18-29—American Road Builders Assn., Annual Convention, Cincinnati, Ohio.
- 25-28—National Automotive Accessories Manufacturers of America, 33rd Annual Exposition, Navy Pier, Chicago, Ill.
- 28-29-Private Truck Council of America, Annual Convention, Hotel Roosevelt, New York City.
- 30-Feb. 3—National Automobile Dealers Assn., 43rd Annual Convention and Equipment Exhibition, Shoreham Hotel, Washington, D. C.

FEBRUARY 1960

16-13-International Automotive Service Industries Sliow, The Coliseum, New York City.

Use Wagner Air Brake Components to Increase Safety . . . Reduce Maintenance!



ROTARY AIR COMPRESSORS have a low temperature air delivery. This prevents carbon formation—reduces fire hazard—lets you use flexible connection in discharge line. Rotary operation provides thousands of overlapping air compression impulses per minute for smoother, quieter operation—increased belt and coupler life.



BRAKE APPLICATION VALVES. Hand valve is designed with extra long handle for convenient operation. Gives driver independent control of trailer brakes for smooth stops through entire range of deceleration. Foot application valve meters air smoothly through the range from slow to emergency deceleration—has extra high flow capacity—is light in weight and simple to service.



LOW PRESSURE INDICATOR—buzzer or lamp warns the driver if oir pressure falls below the safe driving range. Warning circuit is controlled by a pneumatic switch which is connected to the pressure side of the air brake system. Unit automatically closes the circuit if pressure drops below a predetermined value.



BRAKE CHAMBERS have fully oil-resistant diaphragms of nylon and neoprene to provide much better wear characteristics—less deterioration. All metal parts are of corrosionresistant material, or are plated to prevent corrosion. Diaphragms are interchangeable —will fit in other makes of brake chambers.



POWER CLUSTER converts 100 p.s.i. of air pressure into approximately 1500 p.s.i. of unvarying hydraulic pressure. Gives much more uniform metering control than "booster" type hydraulic units. Provides power actuation through the entire range of braking and, in connection with our application valve, gives "low pedal" hydraulic brake operation.



MOISTURE EJECTION VALVE prevents moisture accumulation in the air tank. It is fully automatic, operating in the 15-25 p.s.i. pressure range. Normal brake applications operate the valve, keeping reservoir clean and moisture-free. Expulsions occur without a notable drop in gauge pressure.



TRACTOR PROTECTION and EMERGENCY BRAKE VALVES for combination vehicles—provide manual and fully automatic protection. In, emergency they can be triggered by pulling the valve knob—however, the fully automatic units will activate without driver attention in any emergency due to trailer break-away or air loss failure.

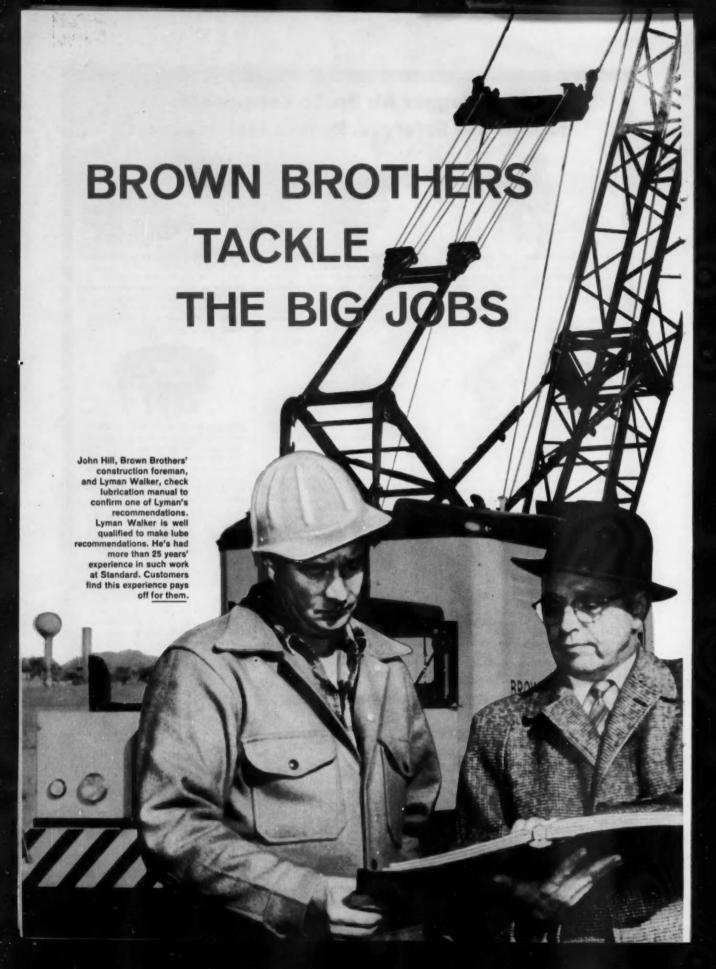


RELAY QUICK-RELEASE VALVE controls the brakes on specific axles, acting in unison with the driver-controlled application valves. Automatically meters pressure directly from a reservoir tank, speeding normal braking and release. Low differential between input and output pressures provides better balanced braking actuation.



ALCOHOL INJECTOR keeps air lines and air reservoir free of ice. Connects to the discharge side of the compressor—does not contaminate the oil. Is of all-metal construction—no glass to break. Has extra large capacity—requires less frequent refilling.





STANOLUBE Motor Oils and Standard Oil technical service keep equipment on the move

X X

When Brown Brothers Construction Company, Lansing, Michigan, tackles a job, they have the equipment to do the work. Likewise, they have what's needed to maintain equipment on the toughest jobs. They use Standard Oil products and technical service. To move equipment on highways, the contractor employs a 60-ton trailer unit powered by a 300 hp GM diesel, one of the largest such units in service in Michigan. For moving dirt, Brown Brothers use Twir-Power Euclid Scrapers.

For lubrication of all of its equipment, Brown Brothers relies on STANOLUBE Motor Oils. Why? Because these motor oils are especially formulated to take the heavy duty service imposed on them.

The technical service needed to see that equipment gets the lubrication required is provided by

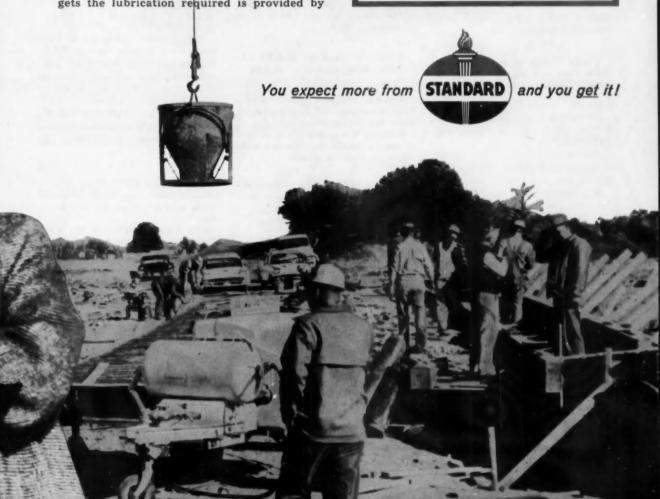
Standard Oil lubrication specialist Lyman Walker. Lyman has more than 25 years' experience helping customers keep equipment in service and eliminating down-time due to lubrication failure.

Get this kind of help on your job. There's a Standard Oil lubrication specialist near you anywhere in the 15 Midwest or Rocky Mountain states. Call him. Or contact Standard Oil Company (Indiana), 910 South Michigan Avenue, Chicago 80, Illinois.

Quick facts about

STANOLUBE Motor Oils

- Made from highest quality base stock. Wax and unstable components removed.
- Detergent-dispersant additive controls severe deposit and wear problems caused by adverse fuel quality and heavy-duty conditions.
- Oxidation stability maintained and bearing corrosion controlled by special additives.
- Oil flow in all weather assured by exclusive pourpoint depressant.



Laugh it off

Blonde Cutie Pie: "Hello, hello, is this the Police Department? Well, good, I want to report that I've been assaulted."

Desk Sergeant: "Hold on a minute lady, when did this happen?"

Blonde Cutie: "One night last week."

Desk Sergeant: "Last week? Why didn't you call us right after it happened?"

Blonde Cutie: "Well, I didn't know I had been assaulted until this check bounced."

ccs

Weavin' Willie says: "Some men battle their way to the top-others bottle their way to the bottom."

001

Maintenance Steno: "Don't let mother catch you hugging and kissing me."

Apprentice Diesel Mechanic: "But, Mabel, I'm not hugging and kissing you."

Maintenance Steno: "I thought I'd warn you just in case."

ccs

FREIGHT HANDLER'S WIFE: "DOCTOR, DOCTOR, MY LITTLE ALICE HAS BEEN EATING SAND! WHAT SHALL I DO?"

DOCTOR: "JUST BE CAREFUL AND DON'T FEED HER ANY CEMENT!"

003

Spifflicated Truck Mechanic: "Shay lady, muh shigaret lighter quit, ya gotta matsch?"

Hoity-Toity Dowager: "Why, you drunken beast. You don't need a match. You're lit up like a Christmas tree already. If I were in your condition I'd shoot myself."

Spifflicated Truck Mechanic: "Yesh, an' if you wush in my condishion, you'd mish." First Greasemonkey: "I'm through fooling around with alcohol. Durn stuff broke up my home."

Second Greasemonkey: "Whatsa matter. Couldn't stop drinkin'?"

First Greasemonkey: "No, 'twern't that. The damn still exploded."

cc.

LEADFOOT LOUIE, THE TRUCKING IN-DUSTRY'S GIFT TO THE LADIES, SAYS: "A PRETTY GIRL IS LIKE A MELODY. AFTER YOU MARRY HER YOU HAVE TO FACE THE MUSIC."

0.0

Didja hear about the cannibal who loved his fellow man-medium rare.

CCI

Trucking Tycoon: "You young whippernsapper, I'll teach you to make love to my daughter."

Beatnick Lover Boy: "I wish you would, Daddio old boy; I'm not making much progress myself."

"Cici Jay"



"Of course you can see me Saturday night. I'll be driving by your house with Charlie Brown!"

Late one evening at a Trucking Convention held in New York recently, the doorman at the famous Latin Quarter assisted four happy delegates into a taxi and told the driver: "This one goes to the Roosevelt; these two go to the Waldorf; and the one with the hiccups goes to the Statler."

In a few minutes the taxi was back. Beckoning to the doorman, the driver asked: "Would you mind sorting these fellows out again? I hit a bump."

ccs

Safety Sadie: "Cora, you've been looking for a 'bright young feller' for several years now. Why don't you strike up a case with that new OS&D Clerk? They say he knows everything under the sun."

Catty Cora: "Nothin' doin', Sadie. I'm only interested in men who know what to do under the moon."

00.

Truck Dispatcher: "Was your wife pleased with the velvet toreador pants you gave her for her birthday?"

Line-Haul Driver: "Yeak, you should have seen her beam when she put them on."

001

Slim 'n' Greasy, our Shop Roustabout, says: "Have you heard the one about the trapeze artist who caught his wife in the act?"

cci

TANKER TRUCK DRIVER (TO AP-PROACHING WAITRESS WHO WAS VIGOR-OUSLY SCRATCHING HER NOSE); "Do YOU HAVE ECZEMA?"

DINER WAITRESS: "LISTEN, MAC, NO SPECIAL ORDERS. JUST WHAT'S ON THE MENU."

Resume Reading



Batteries work—hard. They seldom rest. To start a motor they use up a tremendous amount of energy—over long hauls the battery charges—sometimes too rapidly. When stopped, the battery discharges.

For long satisfactory service and life, the amount of charge and discharge can be controlled to suit each type of driving ...

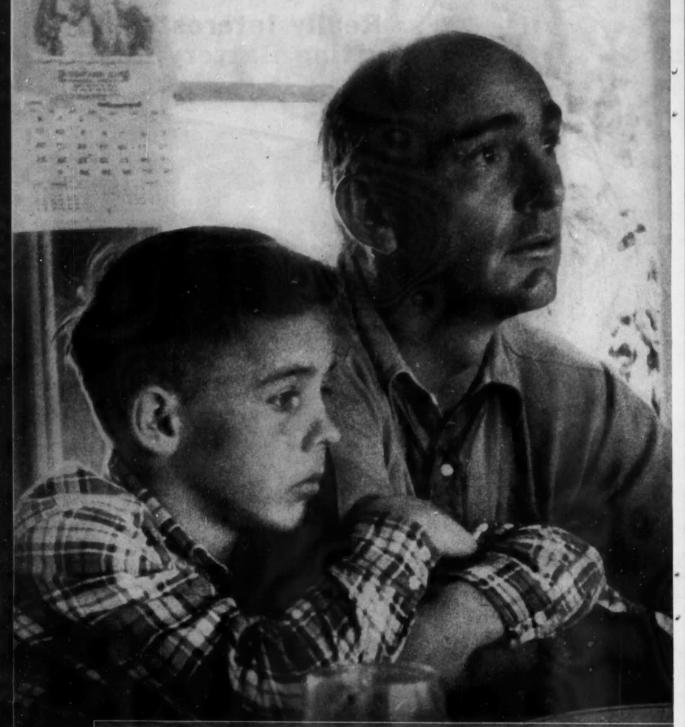
depending on stops, starts, long hauls and so on.

We have helped many fleet owners cut their battery costs with the Gould-National Fleet Battery Maintenance Plan. We'll be glad to help you.

There is no charge for this service. Use the coupon below or write Fleet Dept., Gould-National Batteries, Inc., St. Paul 1, Minn.

I I I	We are interested in your Fleet Battery Maintenance Plan. Have your service engineer call us for an appointment.
Gould-National	CO. NAME
BATTERIES, INC.	MY NAME
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STREET
3 9	CITYSTATE

what's human life



because no one can compromise

worth?...ask yourself

...ask your youngster

Our answer is expressed in safety products of uncompromising quality. That's why you find priceless protection in Signal-Stat Directional Signals, Sigflare and Flarestat switches... and now, in Signal-Stat's new, incomparable Clearance Lamps.

What's human life worth? We asked it before designing these new Clearance Lamps. And because we did, you'll find Dual-Bulb safety where, even with one bulb out, they are at least 4 times brighter than S.A.E. requirements. Sockets are non-corrosive brass, not steel. Snap out lenses are shatter-proof, non-fading acrylic, never polystyrene. Pigtails are heavy wall, heavy duty, 16 gauge, not thin 18 gauge.

What's human life worth? Ask yourself...then ask to see the new Signal-Stat Clearance Lamps. Decide whether or not you can afford to do without them, especially when they cost no more.





A quick twist with screw driver or coin releases lens.





Merely press down and slide the lens to release the patented "click" lock.

NO. 12M "O" RING, DUAL-BULB CLEAR-ANCE LAMP—A major advance...both in design and in speed of bulb replacement. Signal-Stat's exclusive "Twenty-Twenty" design creates two optically perfect lamps in one. Hugs the body with less than one-inch thickness. Change bulbs in seconds without tools. Exclusive self-lubricating "O" ring secures the lens without screws or retaining ring. The first clearance lamp designed to

NO. 11M ARMORED CLEARANCE LAMP-

inside and out!

accommodate conventional as well as exterior wiring. Waterproof! Dustproof! Rustproof:

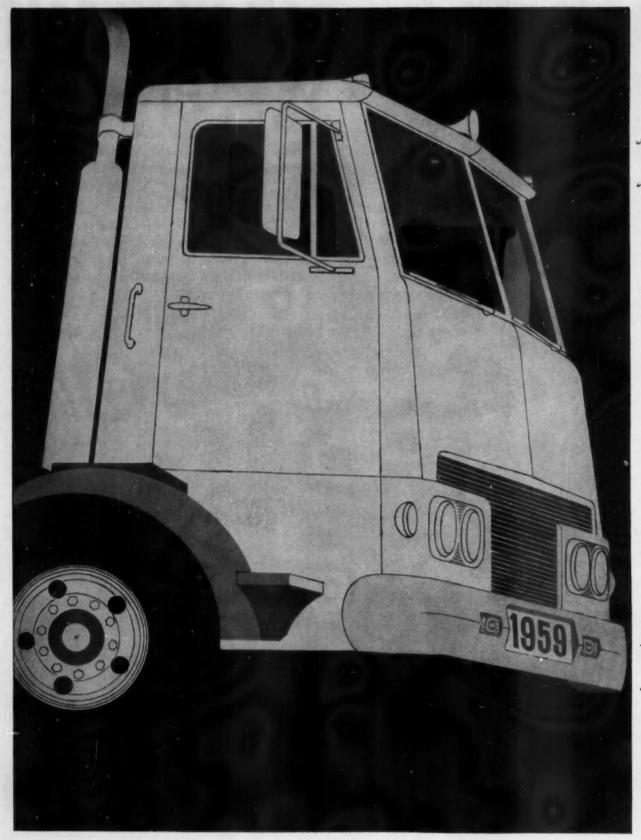
The "Quick-Click" lens actually permits bulb changing in seconds. No tools necessary, no screws or retaining ring. A pressure pad of special rubber compound tightly seals the lens to keep out moisture, dirt and dust. Flush mounting without protruding socket for easier installation. Universal mounting holes, Available in one and two bulb models, steel or aluminum.

See your jobber or write for free catalog.

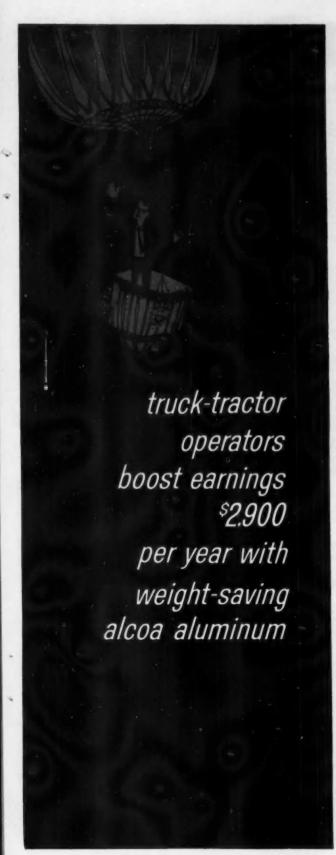
Signal-Stat

SIGNAL-STAT CORPORATION, 523-539 Kent Ave., Brooklyn 11, New York

with safety... specify



48



Today's cost-conscious fleet operator knows it pays to invest the low premium of \$1 for every pound of dead weight trimmed from his equipment. Experience proves that every pound of dead weight shed makes way for an extra pound of payload—worth \$1 a year in extra revenue. Lightweight aluminum units are the logical and practical means for coping with narrowing profit margins and confining legal weight limits.

Slash 2,896 Lb of Dead Weight With Aluminum. Alcoa, through research and close work with the trucking industry, has made it possible to eliminate over a ton and a half of dead weight with lighter, more durable aluminum trucks and tractors. What's more, the premium you pay for aluminum is returned in full within the first year. After that, it's all extra earnings.

2,025 Lb in Chassis Applications. Tandem rear-axle components—axle housings, differential carrier castings, brake spiders and shoes and wheel hubs—save 570 lb in aluminum, compared to steel. Ten aluminum forged disc wheels each weigh 36 lb less than their steel counterparts, and savings of 230 lb on spring and tandem axle suspension hangers bring the total weight reduction to 1,210 lb.

Use of extruded and fabricated aluminum parts for structural members, fuel and air tanks and the front bumper can save an additional 815 lb. The extrusion process, by putting the metal exactly where it is needed for strength, provides the most efficient frame rails obtainable today.

541 Lb in Engine and Accessories. In an engine of approximately 500 cu in., aluminum cuts weight by 250 lb in the cylinder block and crankcase alone. Other reductions in the cylinder head, oil pan, timing gear cover, intake manifold and flywheel housing add up to 393 lb. Weight savings reach 541 lb through other reductions in the clutch housing, transmission case and cover, and auxiliary transmission case and cover.

330 Lb in Cab Components. There are 18 major components in cab design where aluminum cuts weight. Exterior and interior door panels and rear panels, roof, cowl, dash seat box, battery box and rear floor assembly all weigh 50 per cent less in aluminum. Weight saving for the radiator shell assembly is a whopping 47 lb. An aluminum hood assembly weighs only 31 lb compared to 69 lb for its steel counterpart. Other important reductions occur in floor board, toe board, toolbox pan, radiator core, running-board assemblies and miscellaneous reinforcements. In all, they add up to a reduction of 330 lb.

You, Too, Can Get Extra Revenue. For authentic casehistory reports and additional facts about extra-payload aluminum trucks and tractors, write for your free copy of *The Road to Payload Profits*. Address Aluminum Company of America, 1770-K Alcoa Building, Pittsburgh 19, Pennsylvania.



For Exciting Drama Wetch "Alcoa Theatre," Alternate Mondays, NBC-TV, and "Alcoa Presents," Every Tuesday, ABC-TV

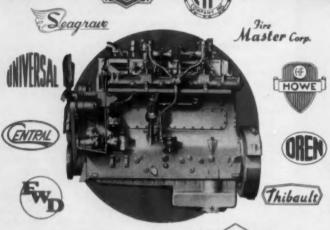


Your Guide to the Best in Aluminum Value

FIRST

in fire fighting





Model 145-GZB-300 hp range High-Output Fire Fighter-

Six cylinders, 5%-in. bore x 6-in. stroke; 817 cu. in. displ., with counterbalanced and vibration dampened 3½-in.
7-bearing crankshaft; dual downdraft carburetion; dual ignition; precision extra high capacity bearings; removable wet type cylinder sleeves, aluminum pistons, overhead valves with Stellite-faced exhaust valves and seats. Arranged for full electrical equipment and all modern accessories. Get Bulletin 1662.

WAUKESHA MOTOR COMPANY, WAUKESHA, WISCONSIN

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Fadories at Woukesha, Wis., and Clinton, lowa

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WARD LA FRANCE

fire fighter ENGINES

PIRSCH

WITH THE NEW Singe DISTRIB-U-SCOPE



nothing blocks your view

SNAP-ON MT-605 DISTRIB-U-SCOPE

This new Snap-on Distrib-U-Scope gives you everything you need in a distributor testing machine — quick checkout, pin-point accuracy, easy distributor servicing and parts replacement. Nothing can touch it on single-point, dual points or high rpm checks. With this machine, you can put distributor servicing on a really profitable basis — and give your customers results that are second to none.

Here's what the Distrib-U-Scope does:

 Checks contact point cam angle or dwell for each cam lobe

- Shows wear in cam, distributor shaft, bushing, breaker plate and housing
- Checks centrifugal and vacuum advance against factory specs
- · Shows contact point bounce, point creeping

Yours on Easy Payments

Become the distributor specialist in your area. For a small down payment and a little each week, this Snap-on Distrib-U-Scope is yours—the very best in scientific tune-up equipment. Ask your Snap-on man for details—and a working demonstration.

The only distributor tester with all these important advantages

Double light-band system — Two bands of lights show, with unmatched accuracy, any mechanical faults on distributor — show dwell and advance of each cam lobe, as well as overlap on dual point systems.

Two-scale automatic tachometer — Tach automatically switches to proper scale as rpm's increase or decrease. Reads up to 4,000 distributor rpm.

Full-view dial — Distributor mounts off to side.

Pin-point accuracy — on either single or dual point distributors.

Positive speed control — Variable speed transformer controls speed for greater accuracy.

Direct-view angle — Instrument panel mounted at 45-degree angle for easy viewing. Controls grouped at bottom for operator convenience.



8026-J 28th Avenue . Kenosha, Wisconsin





Mike Humbert, President, J. W. Humbert, Inc., Green Springs, Ohio, checks the extra tread depth of a Cooper Road-Master Extra Mile truck tire.

Cooper tires average 110,000 original miles on drive wheels for Ohio operator

J. W. Humbert, Inc. operates 20 tractors and 34 trailer units out of Green Springs, Ohio, 356 Cooper truck tires are on the road every day moving general freight and steel products throughout the state. Cooper Road-Master Extra Mile tires are used on front and trailer wheels. Cooper Traction-Treads provide extra power and tread depth for low-cost drive wheel mileage.

Mike Humbert, President, reports: "Cooper Traction-Treads alone average over 110,000 original miles per tire, plus up to 2 and 3 bonus recaps. This is more mileage than delivered by the original tread and one recap compared to another major tire brand previously used. Cooper truck tires have really cut costs for us."

Super Strong Tire Cord
A modern new million dollar electronic
mill is used to super-process Cooper
"Hi-T" DuPont Nylon and Tyrex* cord

to new dimensions of uniformity, compactness, and lasting strength. Cooper tire cord is actually stronger than steel cable, pound for pound — protects much better against bruises, breaks, and blowouts.

Built-In Shock-Guard, Too

Every Cooper truck tire is built with Shock-Guard construction to add still more strength. This exclusive Cooper feature puts protective layers of specially resilient breaker cord and cushioning rubber directly under the tread, at the shoulders, at the sides. The combination of super-strong Cooper "Hi-T" cord and Shock-Guard construction explains why Cooper truck tires run cooler, are practically damage-proof, deliver up to 45% more original mileage, give as many as 4 and 5 bonus recaps.

Start Saving Today

Cooper truck tires consistently cost less to buy, deliver more original and bonus recap mileage to save you money. See your Cooper truck tire dealer for special prices. Or write Dept. 118 today. Cooper Tire & Rubber Company, Findlay, Ohio.



J. W. Humbert, Inc. uses Cooper Traction-Treads on the drive wheels of its 20 tractor units. Tires average 110,000 original miles, plus up to 2 and 3 bonus recaps.





P.I.E. reports Timken bearing replacements cost only .005% of total maintenance

WHEN you operate a fleet the size of Pacific Intermountain Express'—3,964 vehicles all told—dependability and low bearing maintenance are mighty important. That's why P.I.E. is such a large user of Timken® tapered roller bearings—has been since 1942. Their operations cover intracity, intercity, mountain and desert along a 23,000 mile route. And their records show the Timken bearing replacement cost is only .005% of total maintenance.

When it comes to bearings, P.I.E. buys Timken bearings like thousands of fleet owners do—on price. Not initial price, but price per mile. They know it isn't what you pay for bearings that counts, it's the performance you get.

Timken bearings perform so well because we guard their quality from melt of steel to final bearing inspection. We even make nickelrich steel ourselves to be sure it's the best. It's nickel-rich for extra toughness—further assurance of longer bearing life.

When you have to replace bearings, do as so many truck manufacturers do on original equipment—specify Timken tapered roller bearings. And to get the most from your Timken bearings, send for free booklet, "Fleet Owner Service Manual". The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

First in bearings for 60 years

Lowest price per mile ... mile after mile after mile

TIMKEN BARRINGS





LIBRARY

REVIEWING THE BEST IN CURRENT PUBLICATIONS ON MAINTENANCE, EQUIPMENT AND SAFETY OF INTEREST TO TRUCK, BUS AND CONSTRUCTION FLEET OPERATORS

Keep Dirt Out of the Engine

"Defeating Dirt" is the name of a new series of bulletins published by Cummins Engine Co. They have details on diesel engine care for maximum performance, economy and engine life. The bulletins cover air cleaners, tubing, hose and clamps, breathers, filler caps and dipstick, and lube and fuel oil filters.

You can get the bulletins by writing Sales Service Dept., Cummins Engine Co., Columbus, Ind.

1959 Accident Statistics Are Out

The National Safety Council's statistical yearbook "Accident Facts" is now available. It has facts and figures on all types of accidents including a list of accident rates by industry groups, plus accident trends. You can use the booklet in your safety program.

For more information and prices, write the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

How to Choose an Air Compressor

Ingersoll-Rand has published a new booklet called "Compressed Air Fundamentals." In it you'll see how air compressors work and what you should know about them. If you are buying a new one or you're trying to estimate how big a unit you'll need, this booklet will help. Also explained are single and two-stage compressors, and the advantages of each. There's a table which shows how to estimate air consumption for shop tools, lifts, etc.

For a free copy of "Compressed Air Fundamentals," contact your local Ingersoll-Rand branch office or write direct to Ingersoll-Rand Co., 11 Broadway, New York, N. Y. Ask for Form No. 1548.

Take Care of Industrial Batteries

Does part of your job include operation and maintenance of battery-powered materials handling equipment? If so, this new handbook from Gould-National Batteries, Inc., will be a big help. First section shows how the lead acid battery works. Understanding this section will help you in the PM program explained in the "Care and Operation" section. Here you'll get full details on battery installation, charging, and repairs. Repairs include replacing jars, covers, and separators. There's also a table giving the ratios of water to acid required to get specific gravities when mixing electrolyte.

Write Gould-National Batteries, Inc., Trenton 7, N. J. Ask for the illustrated booklet "Instructions and Maintenance Data," Bulletin No. GB-1896.

USDA Lists Latest Exemptions

The United States Department of Agriculture has released a new marketing research report which includes recent court decisions, plus the bills brought before the 85th Congress. There's also a discussion of The Transportation Act of 1958 and an up-to-date Appendix showing the status of agricultural commodities in the ICC's Ruling No. 107. This Appendix alone is a useful reference. Title of the report is "The Agricultural Exemption in Interstate Trucking—Developments in 1957-58" (Report No. 352). It is a supplement to a report released two years ago on the legislative and judicial history of agricultural exemptions.

Single copies are free. Write Celia Sperling, Transportation and Facilities Branch, Agricultural Marketing Service, U. S. Dept. of Agriculture, Washington 24, D. C. Ask for USDA's Marketing Research Report No. 352, "The Agricultural Exemption in Interstate Trucking—Developments in 1957-58."

Tune-Up Chart Covers '59 Cars

The Automobile Electric Assn. has published its 1959 tune-up charts with the latest engineering and specification changes on all 1959 cars. There's a separate chart for each car. Included with each is a wiring diagram booklet. Price of the new series is \$3. including the wiring diagram booklet.

Write to the Automotive Electric Assn., 16223 Meyers Rd., Detroit 35, Mich.

Improve Your Shop Safety

The National Safety Council has a new 96-page illustrated shop safety booklet called "Showmanship in Safety." Each page has ideas for stunts, demonstrations and promotions to help you build interest and get better results in your shop safety program.

For further information and prices, write the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

Brake Manual Is for On-The-Job Use

Ammco Tools has just published a new 316-page Brake Service Manual covering all phases of hydraulic brake servicing. It includes history and theory through basic braking systems and power brakes. Manual is well indexed, has 800 illustrations, and is written for step-bystep on-the-job use.

The Brake Service Manual costs \$7.50 and is available through your local Ammco distributor.

Don't miss listings of current literature from fleet suppliers in the New Product Section of this issue

EXTRA SAFETY and BETTER BRAKING

for your Auxiliary Vehicles

WORLD BESTOS ... manufacturers of the

world famous RED BLOCK COMBINATION Brake Blocks used by leading fleets from coast to coast—now offers you the same extra quality in Prescribed Friction, Dry-Mix, Bonded Shoe Sets for passenger cars and

light and medium trucks . . .

for service trucks, local delivery trucks, medium-weight vons and similar vehicles. In SONDED SHOE SETS or packaged segments for riveting.

PFT

(Prescribed Friction Truck)

for company cars, station wagons, and light delivery vehicles built on passenger ca chasels. In BONDED SHOE SETS a packaged argments for riveting

PE

(Prescribed Friction)

• World Bestos "PFT" and "PF" are premium quality, dry-mix brake lining sets engineered for each make and model car and truck. Install "PFT" on trucks ... "PF" on cars ... and get braking efficiency comparable to that on your "payload" vehicles. It'll pay off in reduced maintenance costs, longer lining life and greater brake safety.

WORLD'S FINEST BRAKE LINING

Order "PFT" and "PF" from your World Bestos Distributor or write direct to . . .

WORLD BESTOS

NEW CASTLE

1989 WORLD BESTOS



Checkful of valuable knowledge, clearly illustrated by big photographs.

Engineered to withstand a "tough life" of stress and strain, these exact duplicates of original equipment are made of the finest alloy steel. In decisions on replacements, "stick your neck out" safely . . . insist on U.S. AXLE SHAFTS!

10 strategically located warehouse stocks in the U. S. assure prompt delivery from your U. S. AXLE JOBBER!

WRITE for FREE COPY of Serviceman's Guide: "Causes and Prevention of Axle Shaft Failures".

"THE WORLD TURNS ON U.S. AXLES"

THE US AXLE COMPANY, INC.

Since 1920 . Pottstown, Pennsylvannia

Weather Resistance...

Another reason why Du Pont DULUX® Enamel is the choice of leading fleet operators



BLAZING CARBON ARC and water spray duplicate and greatly multiply the effects of ultraviolet radiation and high humidity. This "accelerated weatherometer" is only one of many ways Du Pont paint chemists prove the superstamina of "Dulux" Enamel.



CARLING BEER TRUCKS keep the names of the company's products before the public with bright, attractive "Dulux" colors. It's good economy, too, because chip-resistant, weather-resistant "Dulux" lasts longer.



THE BROOKS TRANSFER AND STORAGE CO. used "Dulux" colors to give their trucks the quality look that builds customer confidence. Maintenance is easy, finishes stay attractive for many additional months.

How can you keep a fleet bright and attractive when it's continually exposed to harsh sunlight, rain and dew—the worst enemies of paint. "Choose a finish with built-in weather resistance," say leading fleet operators.

And to qualify Du Pont "Dulux" Enamel as the standard of durability, punishing tests are made 365 days a year. All the weather conditions, hard knocks and vibration of transcontinental service are simulated in tests that maintain the great flexibility of special "Dulux" resins to guard against cracking and chipping . . . maintain the great resistance of "Dulux" to fading and chalking.

TRUE ECONOMY. When you put Du Pont "Dulux" on your fleet, you

take advantage of the continuing experience of the world's greatest paint laboratory. That's why your paint shop will find "Dulux" easy-working, reliable, economical . . . why "Dulux" stays out of the paint shop longer . . . why it snaps back bright and beautiful at every washdown. So remember, specify Du Pont "Dulux" Enamel.

Du Pont "Dulux" Enamel



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

How to maintain temperature in a refrigerated cargo trailer

To hold down heat gain on the road, adequate air and moisture barriers must be built into refrigerated cargo trailers. When heat, air, and moisture get into insulation, efficiency is often reduced to the point that it becomes impossible to maintain correct temperatures.

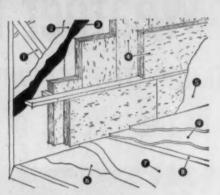
The best way to cut down heat and moisture gain is by sealing the outer shell. The better that seal, the better the investment in longer insulation life and more efficient service.

Armstrong has developed two efficient sealing methods. When interior framing is complex, as shown in the sketch, hardboard can be applied over the framework. This is sprayed with a rubber or asphaltic type sealer and covered with vapor-barrier paper. Where interior framing is simple, the paper can be cemented over each framing member and at all corners.

Fiberglas AT type insulation is then applied, followed by an inner liner. AT Fiberglas is highly efficient, has high resistance to slump, and is easy to apply.

For lightweight construction and load-bearing strength, floors should be insulated with Armstrong Armalite, a foamed polystyrene board-type material with unusually high insulating efficiency and moisture resistance.

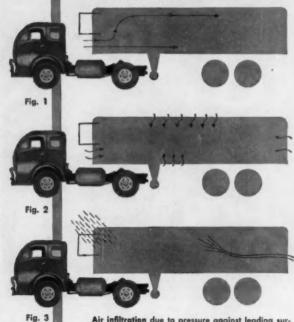
For full information on Fiberglas, Armalite, and the complete line of Armstrong insulations for refrigerated bodies, write today to Armstrong Cork Company, 2110 Rugby Street, Lancaster, Pa.



body sealing where interior framing is complex

1 metal framing * 2 hardboard * 3 spray coating * 4 Fiberglas insulation * 5 inner liner * 6 vaporbarrier paper * 7 Armalite insulation * 8 sleepers * 9 subfloor.

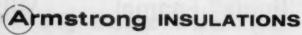
3 ways moisture enters insulation space



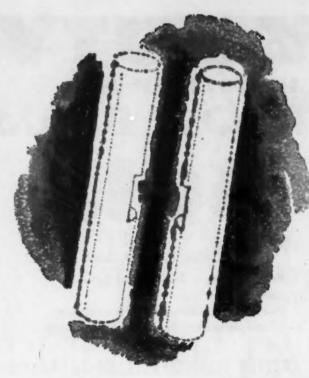
Air infiltration due to pressure against leading surface when body is in motion forces warm moist air through openings in outer shell. (Fig. 1)

Vapor pressure differences force in moisture whether the cargo trailer is in motion or standing still. This is called diffusion. (Fig. 2)

Liquid water in the form of rain, steam, defrost, or wash water may also enter through any break in the inner and outer shells. (Fig. 3)



Fiberglas . Corkboard . Armalite



King Pins... Lubrication... and How to Save Money

Versatile—that's the word for Sinclair Litholine® Multi-Purpose Grease. Use it for king pins. Use it for chassis. Use it for wheel bearings...for water pumps. It eliminates the dangers of misapplication. Moreover, this popular lubricant has earned an enviable reputation for lengthening the life of vital working parts. Change to Sinclair Litholine now. And when management asks how you've cut costs, tell them you've switched to Sinclair—and show them the results.

Find out how Litholine can help you.
Call your nearest Sinclair Representative or write for free literature — Sinclair Refining Company, Technical Service Division, 600 Fifth Ave., New York 20, N.Y. There's no obligation.



Sinclair Litholine®

Multi-Purpose Grease

HEAVY DUTY

SPOTLIGHT LOW BEAM



6013

NEW FOR RUGGED FLEET SERVICE

Redesigned lens • Improved high beam
Glare-reducing filament shield
Shock resistant, spot-welded filament support
E-Z aim platforms • Ruggedized filament mount

BETTER VISIBILITY....SAFER PASSING FOR ALL TWO-HEADLAMP FLEET VEHICLES

OLD BEAM



NEW BEAM



Here's how the new spotlight low beam helps you see better and pass more safely

OLD Range of low beam in old-type 7-inch headlamps is no longer adequate for modern highway conditions. As vehicles approach, the opposing headlights create a glare that tends to cancel out the visibility of both drivers—and cause a critical "blindspot" in passing.

NEW 6000 series spotlight low beam concentrates more light farther along the right side of road, away from oncoming lights . . . provides better visibility thru critical passing zone. Even against 4-headlamp vehicles and undimmed lamps, more light gets through. You pass with less eye strain, less hazard.

FOR PASSENGER CAR FLEETS:

Specify 6006 (6-volt) or 6012 (12-volt) Vision-Aid Headlamps with Spotlight Low Beam.

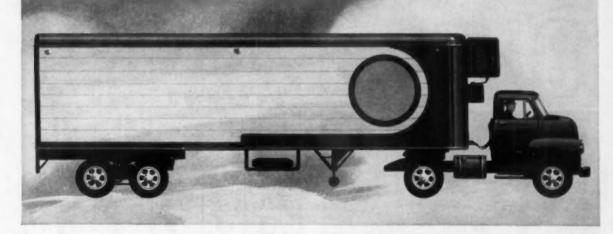
Equip your fleet with greater night driving safety with



NEW TUNG-SOL VISION-AID HEADLAMPS with SPOTLIGHT LOW BEAM Lamp Division, TUNG-SOL ELECTRIC INC., Newark 4, N. J.

Now!
more payload room
for profit
when
you

PUT THE PAIR ON AIR!



Profits get new payload room to grow in with AIRIDE airsprings by Firestone for truck tractors and trailers. AIRIDE airsprings convert waste deflection-space, required by conventional steel spring trailer suspensions, into payload profit space—from 60 to 100 cubic ft. in standard 35-ft. trailers.

AIRIDE airsprings stop road shock from reaching truck, tractor or cargo. Gross vehicle weights can be reduced for bigger payloads with *improved* cargo safety. With AIRIDE airsprings on your truck tractors and trailers, payloads step up as much as one ton per unit! And AIRIDE, the large-capacity, round-type airspring, has been fleet-tested and thoroughly proved over 750 million road miles.

Try AIRIDE airsprings for your fleet. Like other AIRIDE truckers, you'll see substantial reductions in damage claims, tire costs per mile and maintenance expenses. For more

profit-making capacity, plus lower operating outlays, put the pair—both truck tractors and trailers—on air! Get full details with Firestone's free AIRIDE booklet today. Please write Firestone Industrial Products Company, Noblesville, Ind.





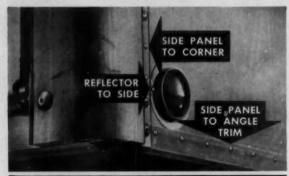
Proved by fleet operators and intercity buses through years of service... totaling over 750 million road miles!

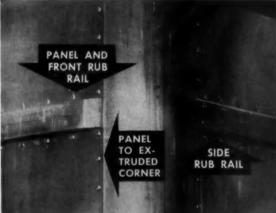
AIRIDE®AIRSPRINGS for truck tractors and trailers by

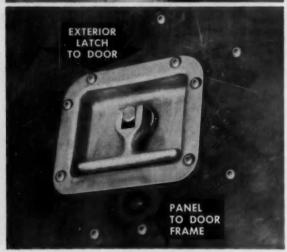


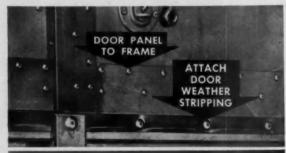
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11 MORE WAYS SOUTHCO RIVETS SAVE TIME AND IMPROVE BODY BUILDING!











"Southco pull-up gives us a tight job . . .

Panels are pulled together automatically by Southco Drive Rivets. They stay tight . . . resist severe vibration and stress.



"Easy to take out if you have to . . .

There's nothing to removing Southco Drive Rivets. Just drive the pin through with a punch. Then drill, pry or shear head.



FIVE TYPES FOR EVERY PURPOSE

UNIVERSAL HEAD

100° CSK HEAD

HEAD

FULL BRAZIER ROUND PLYHEA

PLYHEAD



FREE! RIVET FOLDER

Get your free copy of Southco's folder on Drive Rivets for the Automotive Industry. Contains information and specifications on aluminum and steel Drive Rivets. Write today to: SOUTHCO DIVISION, South Chester Corporation, 228 Industrial Highway, Lester, Pa.



SOUTHCO

TRAILER AND BUS CONSTRUCTION







1 for the GO ... 5 for the STOP



you stop SAFER with

American Brakeblok SPECIFY ITI



Bonded Brake Shoe Exchange

Riveted Heavy-Duty Lining

It takes almost 5 times as much power to stop as to go. Even more on grades like this.

Any brake lining can deliver good stopping power for brief moments. But these ordinary brakes can't take the heat of prolonged braking. That's why heavy-duty service calls for American Brakeblok.

American Brakeblok linings are solid and noncompressible -maintain an unyielding peak friction value right down to the bolt tops!

Surveys show American Brakeblok linings are preferred by one fifth of America's fleet operators . . . far more than any other leading brand. Small wonder . . . they're safer and longer lasting. Bring your safety up to date. Specify 1959 stopping power by American Brakeblok.

AMERICAN BRAKEBLOK DIVISION . Executive Offices. P. O. Box 21, Birmingham, Mich. Plants in Winchester, Va. - Cleveland, Ohio - Hillburn, N.Y. - Lindsay, Ont. - Mexico City, Mexico - Gif, France



1959 New Truck Registrations

STATE		Brock- way	Chev- rolet	Dia- mond T	Dodge	Ford	G.M.C.	Interna- tional	Mack	Stude- baker	White	Willys Jeep	Willya Truck	Others	Total
lahama	July 7 Mos.		774	4	82	531	136	127	80 260	3	16	1	7	56	1.81
laska	7 Mes. July 7 Mes.		4,329	37	474	2,976	957 22	949	260	33 7	134	31 2	50	373 10	10,61
rizona	7 Nies. July		146		35 69 476	155	114	76 64		23	10	13	22 21	67 43	1.07
rkansas	July 7 Mes. July		2.836	1	86	1,839	575 101	429 166	23	47	58	13 79 3	128	233 16	1,57
iifornia	July 7 Mas.		4,903 2,967	19	432	2.694	633 732	766 742	29 36 152	39 71	45 106	28 94 538	33 91 615	- 00	8,81
Inrada	July 7 Mas.	1	3,867 24,521 894	85	432 594 3,255 95	3,367 19,616 525	3,620	3,704	152	367	497	538	615	550 3,881 20	00.85
	July 7 Mes.		3.517	7	683 21	2,773	116 768 34	819	71	92	15 59 16	312	82 395 34 168	189	9,6
annecticut	July 7 Mas.	14	1.090 83	5	250 23	126 925	. 324	67 580 27	104	5 24	127	11 77	168	333	4.00
elsware	July 7 Mes.	13	481	26	120	54 263	20 153	232	267		31	13	5 25	10 64 21	1.00
Natrict of Columbia	July 7 Mes.	2	74 450 786	8	14 93 73	58 461	14 128	28 125	31	1 2	15	8		153	1.4
lorida	July 7 Mes.	1 2	786 8.663	15 124	73	776 5,330	1.484	1,587	38	20	43 549	34 197	21 83 496 12	1,557	2,5
leorgia	July 7 Mos.		5,663 751 4,821	8 22	742 79 895	880 3,951	1,484 196 1,146	1.046	329 26 229	20 98 10 74	22 192		12	65 507	1.9
Inho	July 7 Mos.		282 1,572		53 357	1,213	82 406	129 628	35		1	54 16	68 44 178	11 115	4.6
lineis	July 7 Mos.	********	1 166	26	161	1 086	270	650	41	94 34 159	63	58 29 162	61	175	3.7
ndiana	July 7 Mas.	********	7,944 1,042 5,155	150	1,254	8,940 884	1,678	3,736 400	345 63	48	487 34 317	15	376 34 187	1,130 156 552	3,0 15,8
DWB	7 Mes. July 7 Mes.		5,155 542 3,901	39 94 16	925 70	4,436 545	1,192	2,216 325	363	324 10	13	5	17	44	1 6
ansas	7 Mes. July 7 Mes.		3,901 503 4,336	99 3 27	570 48	3,611 448	650	1,827 204 1,131	74	96 10 80	93	40	127	308 19	11.4
Sentucky			526	2	550 78	3,502 411	761 106	130	43	9	70 7	27	11 94 16 90	158	10.7
ouisiana.	July 7 Mes. July		3,315	10	343 43	2,482	791	826 178	77	42	79 11	12 89 7	90 7	201 55 390 19	8.3
faine	July 7 Mes.	1	4,948	15	410 21	3,814	856 30	1.088	103	45	74	54	67 21	390	11.8
flaryland	July 7 Mes.	13	833 286	12	142 46	781	218	523	42 15	26	25 16	96 15	165 22	176	3.0
	July 7 Mes.	35	2.036	19	433	1,786	542	137 956 154	159	16	158 24	70 18	131	53 362	6.6
Assachusetts	July 7 Mes.	21	1.379	8	118 558 288	1,701	77 496	751	16 123	23 18	161	72 23	58 270	87 479	6.0
Aichigan	July 7 Mas.	********	1,038 7,145	20 76	1,659	948 6,876	300 1,856	267 1.526	39 282	111	41 325	238	44 436	133 893	3,1
Ainnesota	July 7 Mas.		406 3,800	27	148 755	3,819	125 690	278 1,434	13 79	13	25 77	32	18 112	36 362	11.2
Aisaissippi	July 7 Mes.		473 3,204	5	51 388	2,360	142 792	136 820	59		17	1		43	1.2
Alacouri	July 7 Mos.	*******	881 6,703	46	104 737	655 4,767	222 1,592	254 1,888	35 145	48 13 87	17	50 10 61	32 19 120	204 47 376	2.2
Montana	July 7 Mes.	********	1,517		51 408	221 1,415	55 350 83	112	3	15	9 42	12 81	27	17 154	7
febraska	July 7 Mes.		371	8	46	311	83	658 203	80	75	15	8	278 18	25	1.0
lovada	July 7 Mos.	********	3,000	62	367 11	2,513	594 16	1,098	27	36 10	121	52 4	18 94 7	246 49	8.1
New Hampshire	July 7 Mos.		514 60		84 18	424 82	144	145 28	2 4	28		36 12	37 18	240 22	1,0
New Jersey	July 7 Mos.	15	535 413	18	174	419 535	120 187	259 252	81 78	17 6 38	88	53 20	152 46	174	1.5
Vew Mexico	7 Mos. July 7 Mos.	166	3,474	100	853 51	3,586	1,187	1.666	490	38	372 11	139	307	845	13,1
New York	7 Mos.	35	2,454 1,157	10	365 317	1,392	502 258	342	30 108	5 46 18 80	37 201	51 42	28 131 120	110 293	5,4
North Carolina	July 7 Mes.	220	6,770 941	12 52 24	1,808	6,194	1,775	4,136 209	615	13	1,078	357 17	120 880 14	2,184	26.1
North Dakota	July 7 Mes.		5,018 176	45	657 45	4,964 118	1.154	1,164	403	95	327	136	109	426	14.4
Ohio	July 7 Mes.		1,183	18	261	1,028	235	574	5	26	2	14	35	51	3.4
Oklahoma	July 7 Mes.	10	1,026 8,633 1,078	71	1,555	935 6,578	1,684 146	2,698	38 431	179	70 764	15 199 11	52 490 11	1,115	22,
-	July 7 Mes.	********	5,813		87 504	4,157	796 104	1,183	103	53 24	16 83	39	47	140	12,1
Oregen	July 7 Mos.	********	2,870	17 46	49 465 258	2,401	587	210 836	23 138	115	45 294 86		83 418	54 536	1.
runnsylvania	July 7 Mos.	116	1,051 6,514	21 106	1,737	904 5,591	250 1,577	530 3,398	119 985	159	86 827	57 385	127 888	1.007	23.
Pthode Island	July 7 Mos.		42 394		383	47 432	18	44 200	47	6	1 28	10	22	36 199	1.
South Carolina	July 7 Mes.	********	346 2,463	7	36 466	317 1,934	94 428	80 485	93	8 38	5 59	11 36	13 50	29 232	6.
South Daketa	July 7 Mes.		1,350	1	42 273	165	50 321	132 732	2 3	1	1	5 37	15	10 74	4.
Tennessee	July 7 Mos.		598 4,208	1	53	487	156	143	51	8	23 18 94	20 72	79	39	1.
Texas	July	*******	3,810	19 5 34	671 480	3,175	1.025 464 2,884	1,046 751	490 72	51 56	77	72 48 285	54 40	289 114	11.
Utah	7 Mos. July 7 Mos.	********	21,301	34 8	2,206 68	14,251 175	70	4,002	384	276	550 5		252 19	834 12	47,
Vermant	7 Mes. July 7 Mes.	7	1,368	1	68 396 14	1,088	392	434 27	27	40	83	30	100	122	4,
Virginia	17 Mes.		435 529	3 2	99 76	443 448	166	209 209	11	12 10	15 18	72 20	128 27	129	1:
Washington	7 Mos.	1	3,541	12	772 121	2,972	715 177	1,113	205	109	101	101	210 27	449	13.
West Virginia	17 Mes.		3,180	13	646	2.823	967	1,086	82	71	73 15	56	222	633	9.
	7 Mes.		1,559	24	52 376	1,289	81 574	78 387	7 55 29	58	90	56 28 142	46 278	147	4.
Wisconsin	7 Mes.		3,320	29	80 547	2,954	152 755	396 1,862	130	85	90 36 159	118	47 240	74 445	10.
Wyoming	July 7 Mos.	********	1,109	8	20 198	140 878	53	72 333	1	4	13		34 192	8 62	3.
Fotal	uly, 1989	80	31,279	336	4,925	28,166	6,726	10,499	1,204	618	1,251	789	1,547	3,529	88
Total July, 1658 Total 7 Menths, 1959 Total 7 Menths, 1956		74	23,399	276	3,301	18,109	4,858	7,443	1,222	405	996	800	972	2,761	64,

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Sealed Power KromeX piston ring sets with stainless steel oil rings

control oil!

In just two short years *the* stainless steel oil ring has won acceptance with mechanics and car manufacturers. It comes in fast, controls oil even under high vacuum conditions or in tapered and out-of-round bores.



Just one of the reasons why

They seat instantly. Here you see cross-section views of both the top compression ring and the stainless steel oil ring. Both the face of the compression ring and the side rails of the oil ring are chrome-plated for long life.

The chrome facing on the top compression ring is factory-lapped for quick seating. This lapping process is the equivalent of several hundreds of miles of actual engine operation.

The steel side rails of the oil ring are heavily chromed to reduce friction and impart long, efficient life. A special factory-applied finish assures immediate seating. The chrome facing has microscopic pockets which hold oil and forms a perfect seal with the bore.



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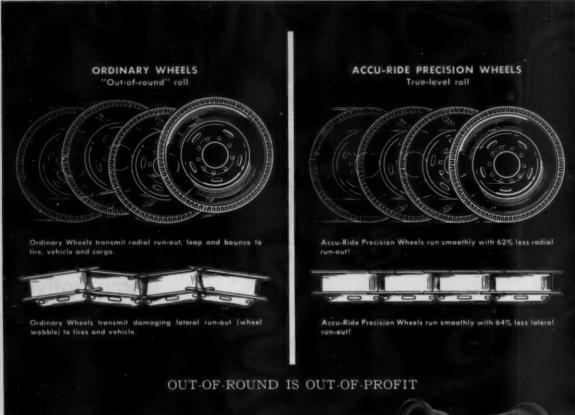
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Sealed Power KromeX Ring Sets

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Here's why leading truck manufacturers are switching to Firestone ACCU-RIDE wheels!



The truest rolling wheel ever made, Firestone's Accu-Ride increases service life of tire and vehicle, cushions cargo and reduces driver fatigue to produce the most economical and efficient wheel in the industry! Only Firestone Accu-Ride Wheels offer you all this: truly round construction with less wheel bounce • completely accurate construction with less wheel wobble • symmetrical construction with less out-of-balance • the only design especially developed for modern loads, speeds and stresses • better stress distribution in the disc • improved physical properties in the material • better and stronger fastening of the disc to the rim • better over-all tolerance controls • the best corrosion-resistant coating in use today—Firestone Perma-Plate.

TRUE PRECISION CONSTRUCTION

SPECIFY FIRESTONE ACCU-RIDE WHEELS—THEY'RE AVAILABLE AT NO EXTRA COST FOR EVERY TRUCK AND BUS AND TRUCK TRAILER ON THE ROAD!

For free brochure on Firestone's new precision Accu-Ride Wheel write

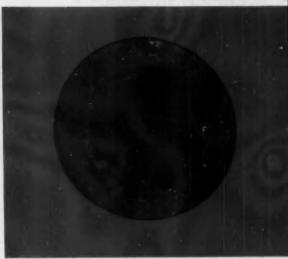
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AKRON 1, OHIO INTEGRITY, QUALITY, ACCURACY, DEPENDABILITY



The EATON Process of Aluminizing Exhaust Valve Heads PREVENTS PRE-IGNITION

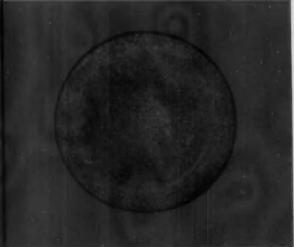
CAUSED BY INCANDESCENT SCALE



NOT ALUMINIZED

Note Scale which Promotes

Pre-ignition



ALUMINIZED

Absence of Harmful
Scale Prevents Pre-ignition

Conventional exhaust valve steels, run at high temperatures, tend to corrode and scale, promoting damaging pre-ignition. This condition can be overcome by the use of expensive high-alloy materials. However, there is a simple and less expensive solution to the problem. By applying the Eaton aluminizing process to conventional exhaust valve steel, resistance to corrosion and scaling can be increased tremendously, thereby eliminating a condition which can be a major cause of pre-ignition.

Inlet valves conditioned by the Eaton aluminizing process also are contributing to the increased efficiency, dependability and service life of engines.

Our Valve Division engineers will be glad to discuss the application of Eaton aluminized valves to your engines. Send for illustrated literature.



Aluminizing of Inlet Valve Seat-Face Prevents Oxidation

After aluminizing by the Euton process, this plain carbon steel valve was placed in an air atmosphere furnace at 2000°F, for 16 hours. Gross exidation of the base steel resulted. The aluminized seat-face and margin areas were unaffected.

EATON

MANUFACTURING COMPANY
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NEW MILEAGE RECORD-BREAKER!



Fleets report the new Cross-Lug U.S. Royal Fleetmaster Dual-Purpose-Nylon outwears all in rugged highway service!

Right across the country, users say this great tire is establishing all kinds of new records for highway mileage. U. S. Royal built it to do just that. 60% deeper tread, of new "Maximum Mileage" compound, substantially increases wear, reduces per-mile tire costs. Big deep cross-lugs deliver 35%

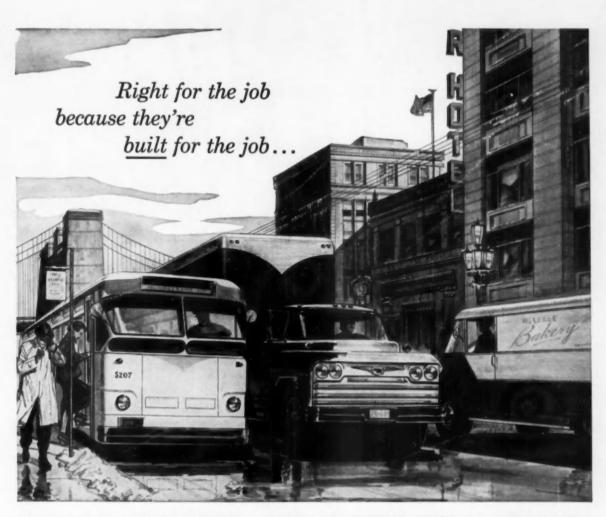
more pull-power. Double-Strength Nylon cord defies impact blowouts. Test a set of these new U. S. Royal Dual-Purpose-Nylon Tires, in tubed or advanced tubeless construction. Call your U. S. Royal Dealer now. And make sure to specify "U. S. Royal" on the next new equipment you buy!

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Evans heaters . . . designed specifically for trucks and buses . . . are built for heavy-duty operation.

An Evans heater keeps the driver comfortable with a continuous flow of fresh, warm air. It also provides ample defrosting, keeping the windshield and side windows clear at all times.

Evans heaters do a better heating job because they provide both high BTU ratings and proper heat distribution. Without proper heat distribution, high BTU ratings are meaningless.

There's an Evans Heater for every commercial vehicle in use today. Each is backed with a parts "repair or replace" warranty good for a full year or 50,000 miles, whichever occurs first.

If you want the best "heat insurance" you can buy for your trucks, write for full information to Evans Products Company, Dept. Q-10, Plymouth, Michigan.

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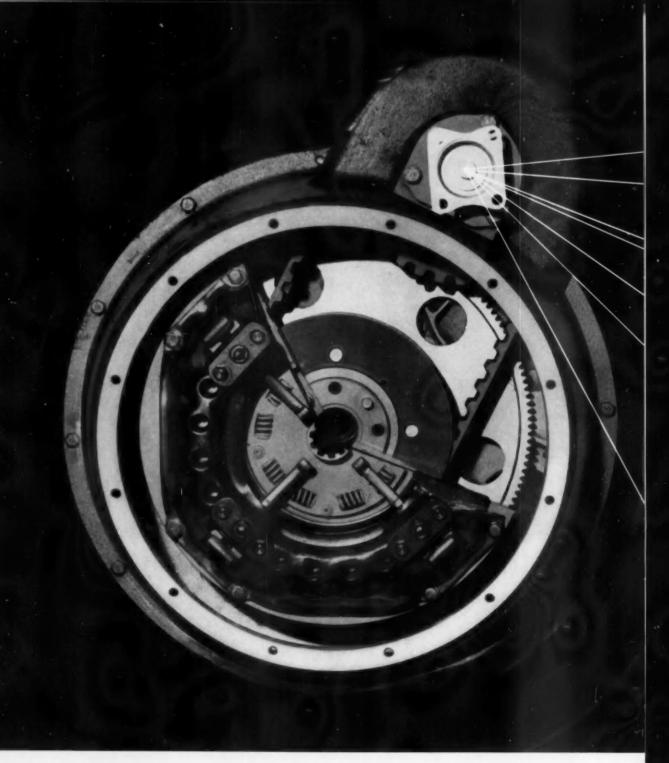
EVANS PRODUCTS COMPANY ALSO PRODUCES:

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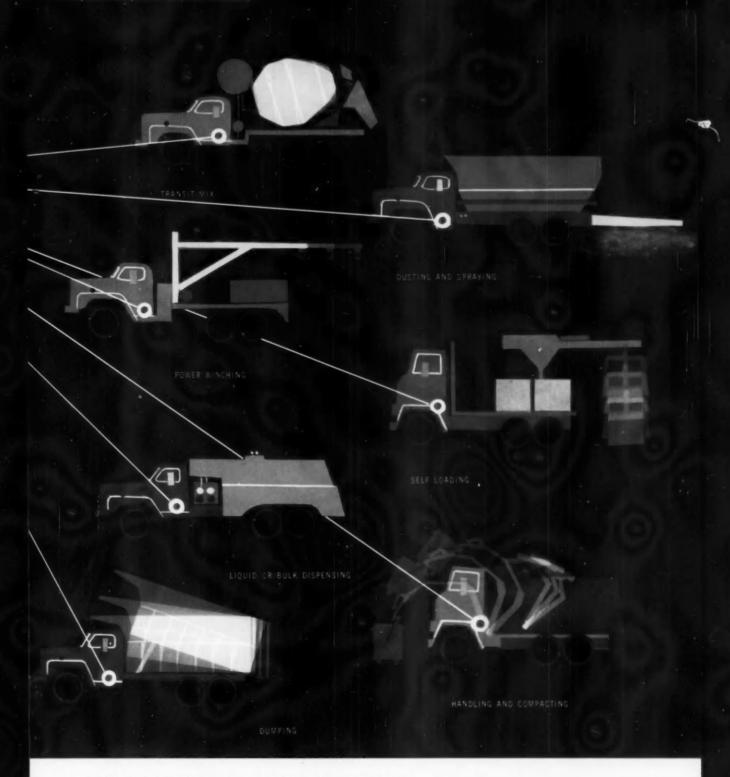




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RECO



Reo's compact Flywheel P.T.O.—proven in transit-mix operation—
is now available as an integral part of the chassis engine drive
in custom Reo vehicles for a host of specialized uses. Perhaps yours.

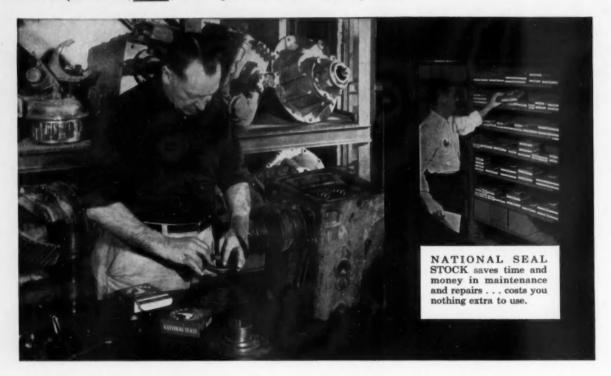
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REO DIVISION, The White Motor Company, Lansing, Michigan.



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Better products, faster, from your National Seal jobber:



Save...replace all oil seals with National at each preventive-maintenance inspection!



You slash costly vehicle downtime . . . save on labor with rigid overhaul standards, new National seals every time

America's biggest fleets replace all oil seals in an assembly during routine inspection and rebuild! They've found that time and labor to remove, repair and replace a malfunctioned assembly costs far more than rigid preventive maintenance—including new National seals. Here's how to profit from their experience:

Install a National Service Stock. First, your National Seal jobber surveys your needs, recommends a basic stock for you to buy. Then he inventories it periodically, tells you what you require and how to modify the stock to your changing needs. Replacements are always on hand to use whenever a seal is removed.

Equipment dependability means money in your pocket, so rely on National Oil Seals—in leather or synthetic—to keep lubricant safely in its place. Call your National Seal jobber today!

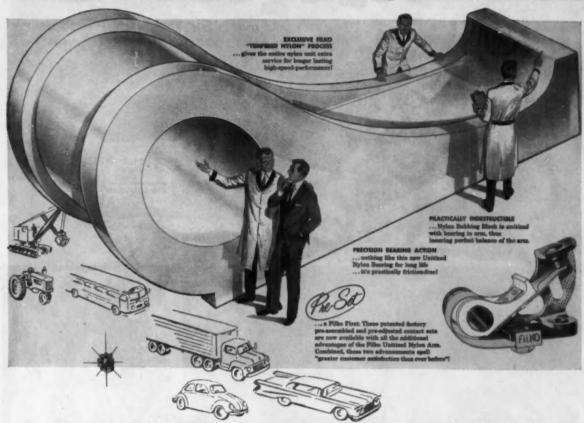
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DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 13, MICHIGAN

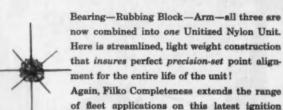


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Unitized Nylon Arm Contact Sets - in both "Pre-Set" factory pre-assembled and conventional types. Here, again, is another reason why every "Crown Jewel of Ignition" is more than a replacement part . . . it's a true improvement in ignition!

achievement ... with the first complete line of

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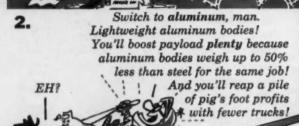
A case of cold feet



Great gattoping gas bills! Our proput pooping out! with Sir Payload Pete (the modern Aluminum Knight)



Easy there, pal. There's a simple way







10 years' service-and still going strong! Back in 1948, the Hammon Baking Co. of Jefferson City, Missouri, purchased a 4400-lb. delivery truck equipped with an aluminum body from J. B. E. Olson Corp. Compared with an equivalent 6350-lb. wood and steel unit added 6 months later (and now retired), the body made with Kaiser Aluminum has been operating at almost a full cent and one-half less per mile. And it still has many more years of economical service ahead. Small wonder Hammon has now completely converted to aluminum!



THE BRIGHT STAR OF METALS

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OIL SEAL QUALITY PAYS OFF IN PAYLOADS!

Preventive maintenance cuts downtime . . . keeps payloads on the move. Good preventive maintenance demands replacing oil seals every time a hub is off! A small investment in oil seals protects costly bearings, drums, and cylinders and keeps equipment rolling.

Chicago Rawhide, with nearly a century of manufacturing experience, leads the field in supplying

O.E.M. with quality oil seals for everything on wheels ... from the smallest vehicles to the behemoths of the roadways. O.E.M. engineers demand top quality in critical parts such as oil seals ... that's why C/R has been designed into every major vehicle manufactured. Always replace with the seals manufacturers prefer. Be sure safety is sealed in ... be sure your payloads roll with the finest Oil Seals made—C/R!



For added convenience in stocking and inventorying your seals, ask your C/R supplier about this specially designed stock cabinet.



CHICAGO RAWHIDE

SERVICE SALES DIVISION ELGIN, ILLINOIS



Talbert's "Skeleton-Frame" construction provides the stability of frame-type Dump Trailers . . . PLUS . . . the increase of thousands of pounds to your payload! Only Talbert combines the features of frame construction with "frameless" light weight.

CHECK AND SEE . . . you'll agree Talbert gives more!

STABILITY AND SAFETY—All axles are securely on the ground during lift.

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Don't chance it! Get that extra margin of safety! . . . with increased payload! Talbert's "Skeleton-Frame" Dump Trailer is available in 20 and 26 foot lengths. Get Talbert Trailers for longer service with less maintenance. Your Talbert Distributor will gladly tell you all about it . . . see him today . . , or write for complete information!

7990 WEST 47th STREET
LYONS, ILLINOIS

Most of us know drivers who are trying to be Perfect Slobs.

They try hard, too.

But somehow they miss the few tricks that separate a Perfect Slob from just a plain ordinary one.

Being a nice guy, you want to help the boys along. So here are a few tips you can pass on to those trying to boost their slob rating.

- Never signal for a turn.
- Or if you do, leave your turn signal on for a black or two after you've made the turn.
- Neglect your appearance. Who ever heard of a neat slob?
 - Insult the customers.
 - Park in front of driveways.
- If you can't find a driveway, double park.
- Use your horn. Use it instead of your brakes. Lean on it when the driver in front doesn't dig outs when the green light shows.

Of course, if the guy is almost a Perfect Slob, he won't take your —or anyone's advice. That's the way slobs are.



Here's the PROOF! HASTINGS oil filter cartridges keep oil clean...

Hastings keeps oil clean from filter change to filter change*—and you can prove it! Dipsticks from engines with ordinary oil filters may show dirty oil after fewer miles than you think. BUT oil shows clean on the dipstick of an engine with a Hastings Oil Filter Cartridge—right up to recommended filter replacement time.

The difference is Densite, an entirely different filtering material. Millions upon millions of selected, pressure-packed cotton fibres absorb dirt far beyond the capacity of ordinary filters. This is important—because dirt is an abrasive, and abrasives cause

Use Hastings Oil Filter Cartridges for every filter change. It pays off in longer engine life—better engine performance—fewer service requirements.

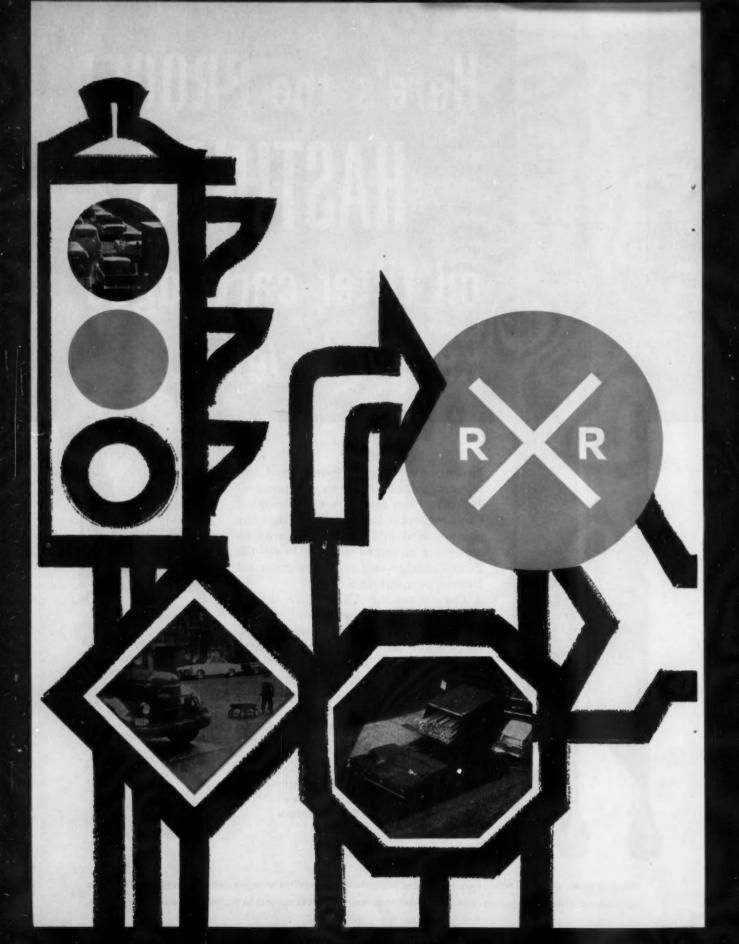
HASTINGS MANUFACTURING COMPANY • HASTINGS, MICH.

Hastings offers a complete line of
Oil, Fuel and Air Filter Cartridges



Proved by tests conducted under supervision of Pittsburgh Testing Laboratories, in accordance with U. S. Bureau of Standards procedure.

U. S. Patent Nos. 2,797,811 2,584,771





CUMMINS NEW LINE OF LIGHTWEIGHT DIESELS BEATS GAS ENGINES IN THE BUSY "STOP AND GO" MARKET!

Now the proven economy of Cummins Diesels in trucks specially designed for intra-city service! What follows describes the new—thoroughly tested compact line of Cummins Diesels. You'll see how you can have the superior economy and performance of *diesels* in applications that were once considered gasoline engine strongholds!



true for idling situations. A Cummins Diesel will idle four times longer on a gallon of fuel than will a typical gasoline engine. In other words, Cummins Diesels make greater use of fuel than gasoline engines.

Cummins "Stop and Go" models have the same design and components as those proved in heavy-duty highway use. This translates into less strain on moving parts—more miles between overhauls. In addition, Cummins PT fuel system and compression ignition eliminates troublesome electric ignition, carburetion and timing problems. This means less road failures—greater assurance of on-time deliveries.

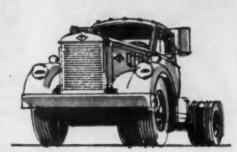
Your final assurance lies in the fact that leading truck manufacturers are either producing or in the process of designing these new engines into their metropolitan models.

New Profits-yours for the taking

What precedes proves Cummins Diesels are more than suitable for city use—they're more profitable! And there is no reason why you can't start earning that extra profit right away! Here're the models available:

70 h.pJ-70	105 h.p.—C-105
80 h.pJ-80	130 h.pJN-130
90 h.pC-90	140 h.pC-140
160 h.r.	.—C-160

One of these engines is exactly right for your city operating conditions. You can choose the right weight, right size and right horsepower to earn you more profit. See your nearest distributor about this new line of Cummins Diesels for new truck power or for repowering. Installation is simple and without expensive complicated chassis modifications. Rely on the experience of the thousands of operators who have made Cummins the No. 1 truck diesell



Diamond T models

Diamond T makes the new Cummins Diesels available in the conventional or tilt-cab 723 series. Shown: the Diamond T 723-C.



White models

The new line of Cummins Diesels are available in the White 2000TD, 3000TD (shown) 9000TD and 4200TD series. Either conventional or tilt-cab tractors.

CUMMINS ENGINE COMPANY, INC., COLUMBUS, INDIANA

INTERNATIONAL SALES & SERVICE — CUMMINS DIESEL INTERNATIONAL, LTD., NASSAU, BANAMAS — CABLE: CUMMAS OVERSEAS FACTORY — CUMMINS ENGINE COMPANY LTD. — SHOTTS, LANARKSHIRE, SCOTLAND

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FRAM RANKS FIRST!

As the world leader in filtration research, FRAM continually provides over 400 manufacturers with new, advanced filter products. Example: FRAM developed the dry-type carburetor air filter—now original equipment on all major makes of today's cars!



Anyway you look at it ... FRAM ranks first!

- More drivers prefer FRAM than any other brand.
- More car makers install FRAM as original equipment,
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FRAM CORPORATION, Providence 16, R.I.



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Avoid Fines, Prevent Down Time, and Cut Operating Costs!

Year-round preventive maintenance by Fruehauf on a regular, prearranged basis will keep your fleet in safe operating condition at all times, eliminate road check fines, and reduce down time. It will also make investment in costly shop facilities unnecessary, and free you from administrative cost in your Trailer upkeep program.

Wherever any unit in your fleet goes, Fruehauf Service is near at hand. If you have a regular service arrangement, your emergency repair work, road check precautions, or timely maintenance work can be handled anywhere, and the charges applied to your home office account. You save unnecessary emergency expense and accounting costs.

Uniform factory-caliber service is available at Fruehauf Branches in all principal cities. Thus, parts installations and complex repairs such as welding done on all of your units, including tanks, is always of uniform, high quality. Costly or unprofessional work in faraway areas is eliminated. All Fruehauf Branches are fully acquainted with all local and I.C.C. regulations. Many major trucking companies are letting Fruehauf handle their entire fleet maintenance program.

Complete service and low-cost parts replacement are available at Fruehauf for all Trailer makes. This eliminates "shopping" and travel time between several repair specialists. Painting, lengthening, converting, insulating, and major body repairs are also available, as well as routine lubrication, safety-checks for I.C.C. safety purposes, and other maintenance work.





*You Can Avoid This By Using A Regular
Fruehauf Preventive Maintenance Plan
. . . tractor inspection, cab repairs included



Fruehauf Branches are equipped for major repair and conversion jobs too, at convenient low terms.

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□ Send full facts, without obligation, on Fruehauf's Fleet Maintenance Plan.
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GET MORE TIRE POWER

Get more miles per dollar...less downtime. Specify tires made with TYREX viscose tire cord—the tough new cord that makes any tire run cooler, softer, quieter and safer... without flat spotting.

Tests

REX

toughest tire cord



FIRST, OVERLOAD 'EM 50%! An independent testing company recently put nylon truck tires and tires made with TYREX viscose tire cord through their paces under the most punishing conditions ... at overloads up to 50% above Tire and Rim Standards!



...THEN BROIL 'EM AT 139°! Tire and roadbed temperatures were carefully checked and recorded. Under blazing Texas sun roadbed temperatures soared to 139° during the test! But tires made with TYREX viscose tire cord easily withstood the punishment!

*TYREX is a collective trademark of TYREX Inc., for viscose tire cord and yarn. TYREX viscose tire cord and yarn is also produced and available in Canada.





...RUN 'EM HARD 30,000 MILES! After 30,000 miles 75 per cent of the tires built with TYREX viscose cord were still fit for service and recapping. But only 12.5 per cent of the nylon cord tires were serviceable ... proof that TYREX is the toughest cord made!



...ONLY TYREX CAN TAKE IT! Careful measurements of all tires showed: the rate of tread wear of 10 ply tires made with TYREX viscose tire cord was up to 21.7% better than 12 ply tires made with nylon cord! So for more tire power ... specify TYREX!

By Don Buck

Safety Director United States Continental Army Command Fort Monroe, Va.

The Saddest Words in Accident IT HASN'T HAPPENED

THE GOAL OF ANY SAFETY PROGRAM is to prevent accidents.

But I fear

there are many safety programs in which so much time is spent analyzing, cataloging and studying accidents which have already happened that there's none left to look for the warning signs pointing to tomorrow's accidents.

Granted, there is much to be seen in viewing yesterday's accidents. But isn't it true that the time to look for the cause is before rather than after the accident?

It is admittedly easier to look at an accident than to look for an accident yet to be. The accident which has occurred is a tangible thing—proof of itself. In contrast, real effort, keen observation and active imagination are needed to foresee how specific conditions or practices combine to produce an accident.

And always arrayed against the prophet of accidents is the backward glance at past performance records and its accompanying "It-hasn't happened-yet" attitude.

To me, "It hasn't happened—yet" are the saddest words in accident prevention.

I recently visited a fleet which had had a sudden upsurge in its accident rate. The safety director appealed for assistance. He spread before me an excellent and detailed analysis. It showed nothing significant when it came to accident causes. Then we went out into the area for a "look see."

A pickup truck pulled from the parking area and

stopped to pick up four men. Two men climbed into the cab with the driver. The others jumped into the back and sat on the rolled edge of the pick-up box, with nothing to hold to. The truck sped away with these men scrambling to keep from falling out. The supervisor, who was guiding me on my inspection, said "Look at those darned fools! They'll ride like that until someone gets killed."

It occurred to me that they would, indeed, unless—! Next, we inspected the fueling area. This was a model layout. NO SMOKING signs were conspicuously posted everywhere. However, the area was littered with discarded cigarette stubs. I commented on this, but the supervisor said, with pride, "We're not too worried because we've never had a fire, here."

Inwardly I added that missing word—"yet."

The shop floor was spotless. The shop foreman, after I complimented him and inquired how he could get it so clean, confided—"Nothing to it—we scrub it with gasoline." "Isn't that pretty risky?" I asked,

providing the safety director and the foreman with a nice lead. "Not in open air. I've been using gasoline for 10 years and never had trouble . . ."

Again I mentally added that word—"yet," while the safety director corraborated the foreman's statement by pointing out that fire losses at this site were a record low last year! Maybe so, but the stage was nicely set for tomorrow's accident.

So it went: Oily rags were neatly piled in a wooden box—flint and tinder for that fire, tomorrow. A truck driven by a yard jockey shot into the work area and with squeaking brakes, stopped just short of a courageous fellow worker who never batted an eye nor moved a muscle.

"How can we detect tomorrow's accidents in time to prevent them? . . . Know the hazards, find them and fix them before they cause an accident."

"Risky?" I asked the shop foreman. "Naw, that guy can stop on a dime. He's never hit anyone. Best man I ever had!" "Won a safety award last year," added the safety director. "He's one of our oldest drivers."

"But hardly the safest," I thought. I wondered just when a brake line would fail, or a patch of grease would add a few unexpected precious inches to change horse-play into horror. Perhaps, tomorrow. Perhaps, later.

Important thing was—we were looking squarely at what likely would be tomorrow's accidents. But no one—the supervisor, the foreman or the safety director—made the slightest effort to intervene. No doubt, if the truck had hit that man there would have been immediate action. The supervisor was reported to give no man a second chance after he caused an accident.

What a pity that there was no inclination to interfere with those men who were trying so hard to have accidents, while feeling so safe because the record was in their favor.

Before I left that organization there seemed to be a better understanding and appreciation for tomorrow's accident. But this attitude is widespread, and it is the essence of *supervisory* failure in safety.

Sometimes I wonder if it is correct to say that accidents are "caused." It might be more accurate to say that they are "permitted." Accidents are permitted because they result from causes which are permitted to exist. Occasional causes become the habitual, unless interrupted.

It is not unusual to hear someone explain away his accident by insisting that he had "been doing that

This Is a Talk-Type Piece

This is a double-length feature. It could have been cut drastically. But then it would have lost its punch.

Most COMMERCIAL CAR JOURNAL readers know the impact of Don Buck's writing. Those who have heard him talk know the impact is even greater. This is a talk-type piece.

I first read it on a hot July Saturday when I was desperate for time. But I took the time and found it rewarding.

You will too. It's a warm and human contribution to adult education on the vital subject of highway safety.

Bart Rawson

same thing for umpteen years and it never happened before." In other words, for a long time he had been permitted to repeatedly do some fool thing, take some unnecessary chance, commit some sort of operational error, until his extended courting of disaster is used as proof the accident should not have finally come.

How can we detect tomorrow's accidents in time to prevent them?

The simplest and most effective approach is KNOW-FIND-FIX. Know the hazards, find them, and fix them before they cause an accident.

KNOW. It has been said that the safe driver has learned to be safe by surviving a lot of narrow escapes.

I like to believe that the safe driver is the product of his own experience plus all the training and knowhow given to him. The prime requisite for preventing tomorrow's accident is a driver who knows the (TURN TO NEXT PAGE, PLEASE)

"The ideal solution or fix, of course, is to remove the hazard. If we can get rid of the hazard, the accident possibility goes with it."

It Hasn't Happened-Yet!

Continued from page 89

Knowledge is vital to the cause. For example, some marine manufacturers and dealers deliver small craft to customers by trailer. Trailered boats can be very tricky, and the rig may sway dangerously at highway speeds. The cause is readily correctible if understood—it results from a tail-heavy load. Moving the boat forward on the trailer so a substantial portion of the load rests on the towing vehicle usually eliminates road sway.

How many accidents result from situations involving drivers who do not know this? One company may send out its driver with the general admonition to "Always be careful." Another may instruct its driver to "Always keep the trailer somewhat tongue-heavy." Which driver do you feel is least likely to pile up his rig in an accident?

Adverse road conditions mess up tight schedules and contribute to accidents. The driver may come on them unexpectedly and find himself in real trouble. Or he may be so delayed, that he will later "pour on the gas" and take accident-producing chances.

From a variety of sources (state police, motor clubs, weather bureau, oil companies) we can obtain up-to-date reports on the route and the weather. With this knowledge, our driver will know what's ahead and be better prepared for abnormal conditions. He is less likely to wind up explaining an accident with those familiar phrases: "all of a sudden . . . I didn't know that . . . to my great surprise . . . out of nowhere . . . I never expected. . . ."

We should know how drivers are performing. The alert supervisor will watch relative life of tires and clutches as fair indication of how individual operators are performing. The driver who habitually delays decelerating for traffic signals or down-grades until he has to tax the brakes will advertise his accident-in-advance methods by increased wear and repair of brakes and tires.

Any chance-taking which a driver is willing to risk in the presence of the supervisor is apt to be pretty mild by comparison with what he will do when away from the boss. Supervisors should KNOW this.

Above all, we need to know the men themselves. The effective supervisor will know that old Joe is worried about his sick child. He will know that George has been hitting the bottle a bit following a family quarrel. And he will be able to do something towards assuring Joe that he is not alone in his concern over the sick child. He may convince George that he is not friendless and that the bottle will only worsen his trouble. This is the stuff with which to-morrow's accidents are prevented.

It adds up to the simple fact that if you don't know, you can't find or fix!

FIND. To find tomorrow's accidents, we have to look for them. And we are often given only furtive glimpses.

We must constantly examine the operation, the equipment, the area, and the personnel concerned to find any condition or practice which could lead to an accident.

One way to find the causes of tomorrow's accidents is by asking questions. In bull sessions with drivers, inquire regarding operations and condition of equipment.

Men are usually more willing to answer a casual question than to initiate a written report. "Bob, How's the rig?" asks the foreman of a driver checking in at a terminal. "O.K., I guess," is the usual reply. "Anything need fixing?" pursues the no-accident-tomorrow supervisor. "Yeah, the air pressure still fades pretty fast, but I manage" is the reply. Now the foreman knows of the hazard in advance of the possible accident. But knowledge alone, will not bring that braking system up to par.

Another way is to inspect. Some companies employ their own road safety supervisors to look for driving failures and violations. Several casualty insurance companies offer effective road patrol service. And several state truck associations sponsor cooperative road patrols.

For several years I have employed a simple method to guide me in identifying a hazardous operation or condition. Hazards are sought by reference to four key words arranged around a simple cross, as shown above right.

With this "hazard cross" in mind, examine every safety aspect of the operation by moving around the "hazard cross" clockwise, while seeking any hazard relating to the key word which might lead to an accident. Starting with Area, one should examine traffic flow patterns, plant layout, obstructions to vision, road surfaces, and other aspects of area for potential dangers.

Next, the Equipment and its accessories are

"Accidents are permitted because they result from causes which are permitted to exist."

brought under careful scrutiny. Are emergency, foul weather, and darkness accessories provided and/or functioning properly? Wipers? Air pressure? Lights? Emergency flares? Tire chains? How about brakes? Horn? Stop lights? Tire pressure? Directional signals?

These are simple things, true, but vitally important when the chips are down. Failure to have them or having them fail likely contributes to far more accidents than we are willing to admit.

How about the load? Is it secure and properly distributed? Within design and legal weight limits? How about that windshield? Is it clean? And is there a cloth to wipe it when necessary?

Next, consider the *Operation*. Just how safely does our man drive? Is he smooth and steady? Does he give clear and early signals of his intentions to change speed or direction? Does the schedule give him sufficient time to be safe, or must he constantly crowd it? Is the operation planned to prevent jams at the wash rack, fuel pumps, or other stations?

Finally how about *Personnel?* Do they know what to do and how to do it? Do they need motivation? Do they know what personal benefits or advantages careful driving will provide them? Are they properly licensed? And have they been checked out on this type of vehicle? Are they physically and emotionally fit? Mild hangovers, anxiety over domestic problems, drugs taken for headaches or colds, even financial worries—any one of these, unless found out in time, can contribute to tomorrow's accident.

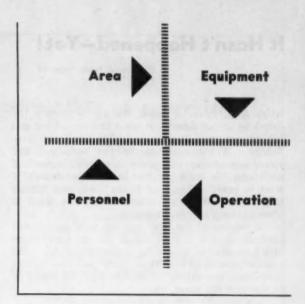
Use this hazard cross constantly. It will help identify those hazardous conditions or actions which are shaping up for tomorrow's accident.

FIX. The "fix" is the very essence of preventing tomorrow's accident.

Failure here is usually in the form of "no action taken" until after the accident occurs. Then we go into action and do the very things which, if instituted earlier, would have prevented the accident in the first place.

Call the "fix" what you like—preventive action, remedial measure, close supervision, intensified effort, increased emphasis, strict enforcement, compliance with requirements, or defensive driving—the "fix" always connotes action taken rather than action planned.

Too many of us, in reviewing reports of inspections or accidents recommend corrective measures only to *higher* authority, rather than to the operating level concerned.



The fix may be derived, after identifying the hazard, by reference to three simple questions:

REMOVE? SAFEGUARD? TRAIN?

The ideal solution or "fix," of course, is to Remove the hazard. If we can get rid of the hazard, the accident possibility goes with it. Thus, we can remove some hazards by repair, by substitution, by engineering revision, and by other means. We may find it possible and preferable to remove unsafe personnel, to abolish faulty operating requirements. However, it is not always practical or feasible to remove the hazard.

We then try to employ Safeguards. We install railings on mountain curves, when it is impractical to move the mountain. We safeguard men from hazardous situations, or guard dangerous areas from men. We provide extra margins of time to safeguard against unexpected problems. We safeguard drivers with energy-absorbing steering wheels, seat belts, shatter-proof windshields, emergency spot lights, safety shoes, and eye protection.

But, in motor transportation, it is not always possible to remove or safeguard against all hazards. So we turn to the last resort (too often the first resort)

(TURN TO NEXT PAGE, PLEASE)

"But isn't it true that the time to look for the cause is BEFORE rather than AFTER the accident?"

It Hasn't Happened-Yet!

Continued from Page 91

which is to *Train* or warn. We try to prepare the driver so he can detect and avoid the myriad hazards beyond our immediate control. We teach defensive driving. We demonstrate driving technique and emergency actions. We provide warning signs and markings. We teach him how to tell other drivers "I want to pass," "Dim your lights," and even "Speed trap ahead." While not absolute, this last resort is often the only practical measure.

The essence of the "fix" was not fully appreciated until I heard a safety lecture by an experienced safety supervisor in Alaska several years ago. The speaker announced that there were two vital factors in accident prevention. "The first one," he stated as he wrote on the board, was:

THE ABILITY TO

RECOGNIZE HAZARDS

To demonstrate this, he uncorked a gallon glass jug which was labeled "Gasoline." Using a medicine dropper, he extracted a few drops and put them into a plastic tube which he corked with a rubber plug.

At this point to the consternation of his audience, he carefully lit a big cigar and apparently unmindful of that open jug of gasoline, he waved the glowing cigar over it and gravely announced that there was sufficient power in a gallon of gasoline to blow us all to kingdom come. He then introduced a spark to the vapor-filled plastic cylinder. It responded with a convincing explosion.

"Now let's review what we have learned here" he said, gesturing with that cigar uncomfortably close to that open jug. Referring to the blackboard, he reminded us that he had identified the first factor in accident prevention as being "The ability to recognize hazards."

He carefully placed that lighted cigar next to the open jug and asked his most attentive audience whether anyone could suggest what the second factor might be. By this time most of us were mixing prayer with hopeful glances at the nearest exit. The audience was transfixed by fear and apprehension, watching the lazy spirals of smoke curl up around that full jug of potent death. It was a most awkward situation, and it involved a senior supervisor.

Finally the tension was broken when one brave soul exclaimed to the speaker: "I don't know your second factor, but—well, for gosh sakes, shouldn't you cork that jug of gasoline and put out that cigar?"

The speaker turned to the blackboard without reply and calmly write the second factor:

THE COURAGE TO

QUESTION AUTHORITY

Then he returned to the jug, tipped it slowly upside down, to show us that it was actually solid glass with only a tiny space at the top for those few drops of gasoline!

"The courage to question authority is the real key to accident prevention," he stated, again. The full impact and meaning will never be lost to any of us who were there.

He then recounted how many hazards were permitted to exist simply because drivers lacked the guts to ask their foremen about it. And because foremen lacked the courage or inclination to question their supervisors.

He went on to point out that the surest indication of this inherent weakness are typical remarks which so often attend the discussions of some hazards: "They ought to fix that . . .," "Somebody ought to warn him . . .," "Wonder how long it will be until someone gets killed because . . .," "I bet the front office doesn't know anything about it . . .," or "Why don't they wake up and . . ."

This is not to suggest that prevention of tomorrow's accident requires a combative and argumentive nature. Rather, it calls for an inquisitive nature combined with simple willingness to ask questions of responsible persons, such as: "Do you know that . . ," "Is it possible to change . . . ," "Is there some reason why we must . . . ?"

Accident prevention is an inherent responsibility of supervision. Many of us fail to understand that steadfast fidelity to this cardinal principle is the key to preventing tomorrow's accidents.

"... so much time is spent analyzing, cataloging and studying accidents which have already happened that there's none left to look for the warning signs pointing to tomorrow's accidents."

"Accident prevention is an inherent responsibility of supervision"

The basic cause of an accident is usually the result of continuing failure by some individual to comply with established rule or procedure.

This failure is a moral disease.

It becomes epidemic wherever supervision is weak and ineffective.

It is the most contagious of moral diseases be-

It is a form of insubordination, whether conscious or otherwise.

It has no respect for record or experience.

When management condones the operator doing a job unsafely or improperly, it contaminates upward as well as downward.

When a supervisor condones remissions in safety, his own safety consciousness has wavered.

. The accident is merely the consequence and evidence of this failure of leadership.

To tolerate slackness in compliance with operating requirements is to invite accidents.

If the chance-taker is not called to account, his practice will become habitual and will quickly infect his fellow workers.

(At this point in this talk-type article, Don Buck gets a little excited and bangs the table with his fist. He lays it on the line as to just where the blame lies for tomorrow's accident. We've set it apart in bold type, printed above. It's worth framing and sticking on your desk. . . . The Editor.)

The firm actions necessary to prevent accidents will not necessarily be welcomed by everyone concerned, nor will their reaction always reflect approval. Rather it is to say that men will do what is required, if little more. They may complain about it, but ultimately their good reason will convince them of the value of what is being done to help insure their safety.

There is a direct relationship between the frequency and immediacy with which management initiates preventive action and the absence of accidents. This is true throughout the whole gamut of motor transportation from lighting a match to driving a prime mover. The implication is clear. Accidents are merely the seeds of wrong practices permitted to grow and bear bitter fruit.

I recall that old sergeant back in 1946 whose outfit was receiving another safety award. Year after year his unit came through accident-free, despite congested metropolitan traffic. I asked him how he managed it.

"It's simple," he replied. "I constantly give them the 'Hey-you' treatment."

Pressed for explanation, he pointed out the eternal key for preventing tomorrow's accident: "Whenever I see anyone who engages in needless chance taking, showing off, or short-cutting it in safety, I go after him right then and there with a big: "Hey you, that's not safe. . .!"

Do you wonder that his outfit had no accidents? He looked for and corrected the hazards of today, knowing that prevention is the key to tomorrow's accidents.

"The prime requisite for preventing tomorrow's accident is a driver who knows the technique of driving, how to keep out of emergencies, what to expect and what is expected of him."



"The pictures were taken from the viewpoint of a Trailways driver literally through his windshield"

How Safeway Trails Uses Safety to Boost Bus Business

It tells its safety story through newspaper articles, school driver training programs, community "fairs," advertising . . . and on the bus





SAFEWAY TRAILS makes safety a sales gospel, preaches it to the paying passenger...and it pays-off.

Most fleet operators sell safety to their own drivers as part of a planned campaign to cut costs. They know a better safety record leads to lower insurance rates, lower maintenance costs and fewer law suits.

But Safeway Trails—operating from Washington, D. C., north to New York City—has expanded its safety program beyond this, uses is as a revenue-building sales tool.

Headquartered in Washington, Safeway Trails is part of the Trailway Bus System. Directing Safeway's operations is veteran bus man, Marvin Walsh.

Walsh, who is executive vice president and general manager, had racked up an impressive safety record for the company. But he felt that there was more potential in safety than "just a cost-cutting operation." He felt that "Safety Means Sales."

"Once we decided to merchandise safety, our first problem was finding some aspect of safety to make our own," says Walsh. Turnpike driving was selected as the showpiece to contrast professional driving with that of the ordinary driver.

To sell the idea of "Trailway Safety," the company took a series of pictures on the New Jersey Turnpike in cooperation with the Turnpike Authority and the State Police. Based on a recent Commercial Car Journal article ("Staying Alive on the Super Roads," Mar., page 89) the photographs show foolhardy driving mistakes habitually made by turnpike drivers. "The pictures were taken from the viewpoint of a Trailways driver—literally through his windshield," Walsh points out.

The Safeway pictures serve as the basis of a feature story on turnpike driving. It's soon to be released by a national newspaper syndicate. They will serve also to illustrate a series of talks on turnpike driving to be made by a Trailways representative as part of school driver training programs.

Newspaper advertising is also a part of the fleet's safety promotion. Ad copy, like the two yet-to-come ads shown at left, emphasize safe drivers and safety of the trip. (Watch for these ads in your local paper if you live in Safeway's operating territory.)

Samuel G. Athey, Safeway's safety engineer who trains drivers for Safeway and its related Trailways of New England, points out that "There are two subjects on which every man feels expert—his wife and his driving!"

"That's what I drum into every trainee driver," Athey says. "We stress that it's up to them to keep our passengers sold on Trailways safety. Equally important, they understand that every motorist on the highway is a potential Trailways passenger."

Pay-off on Walsh and Athey's safety sales philosophy can be seen any morning at the Circle Diner in Maple Shade, N. J., or Chimney House Restaurant in Pennsauken, N. J.—both just off the Turnpike. Dozens of cars are parked at the Circle Diner stop every business day. Their drivers are members of what Walsh calls "The Circle Diner Riders Club."

"Those cars belong to business

executives, salesmen and others who have been sold the fact that it's faster, safer and more economical to commute by Trailways," reminds Walsh.

"Patients don't know what the doctor is doing when he operates because they're not 'amateur' doctors," adds Athey. "But most passengers know the hazards of driving. They can be 'unsold' by an operator who follows too closely, who cuts back too fast after passing, or who passes on a curve or hill."

Safeway's safety campaign is being carried a long step further as part of the community relations program developed under Walsh's guidance by Bauer & Tripp, Inc., Philadelphia-based public relations and sales promotion counsel for Safeway.

Mainstay of this safety and community relations program is a series of Trailways Travel Fairs held in dozens of supermarket parking lots. The Trailways Community Advisory group in each community—made up of civic leaders, government officials, ministers, etc.—invite their friends to these Fairs. In addition, Food Fair supermarkets, the cosponsor—features the Fair in its ads.

Built around a Trailways Five-Star Special coach, the Fair has special safety displays. All of the ICC required safety equipment is displayed on a large (TURN TO PAGE 245, PLEASE)

Trailways safety photographs show foothardy mistakes habitually made by turnpike drivers. They're based on CCJ's article, "Staying Alive on the Super Roads"



Special Paint Cuts Shop Fire Loss

In one building, fire loss was four lives and \$200,000.
In another, it was held to \$20,000. Here's why...

EVER WONDER what a shop fire would cost you? Here's a report that might give some idea . . . and at the same time suggest how you can cut the loss. It concerns fires in two almost identical fleet buildings. Here are the details in brief. . . .

• Place—New York City. Building—an enclosed terminal measuring 80 by 50 ft. Cause of fire—ignited gasoline vapor. Loss—four lives and \$200,000.

Place—Chicago. Building—a fleet shop measuring 79 by 60 ft. Cause of fire—ignited gasoline vapor.
 Loss \$20,000.

Why the dramatic difference? First let's take the four men who lost their lives in New York City. Floor of this building slanted inward, probably was lowest directly in front of the loading platform. Gasoline fumes are heavier than air, drifted down into this pocket rather than dissipated outside.

The fire started at a gasoline pump near the front, swooshed into this pocket. Although details are not available, a screen of flame probably curtained the confused men working on the dock from the exits. And so they lost their lives.

How come the \$180,000 difference in cost? Although some may be attributed to the amount of equipment involved and its value, much of it is attributed to fire-retardant paint.

Shop in Chicago had had its roof trusses, sheathing and bridging sprayed with fire-retardant paint (made by the Albi Mfg. Co., Rockville, Conn.) about three years before the fire. Shop in New York City was unprotected.

In addition to the four lives, the New York City fire destroyed four tractor-trailer combinations (see photo) and their cargo of straw hats, toys and furs. This, despite the fact that the alarm was turned in immediately and the first fire engines were on hand within five minutes.



Above. Unprotected ceiling after fire in New York City. Below. Protected ceiling following the fire in Chicago.



The Chicago fire started when sparks from an acetylene torch ignited the gasoline vapors. Shopmen tried for 20 min to put out the flames, then put in the alarm. (Editors' Note: This is not good practice. Put the alarm in immediately.) Despite this delay, there was no danger of roof collapse as there was in the New York City fire—where the steel beams had started to buckle.

The eight trucks involved in the Chicago fire were repaired and repainted at a cost of about 10 per cent of their value. Operations were resumed within two days after the fire, were back to normal in about 41 days.

The fire-retardant paint—available in standard colors—foams-up when heat is applied forming a black, marshmallow-like mass. In addition to its fire-retardant qualities, the mass cuts heat penetration by its insulating effect. According to Underwriters' ratings, it reduces flame spread as much as 95 per cent.



SHOP

\$10-

\$25

Send us a short description and photograph or simple sketch of the shop-made maintenance short cuts you are using. We'll pay \$10 and \$25 to those who submit good ideas

Shop-Made Baffles Save the Fruit, Speed Up Trailer Unloading

From the shops of Chase & Co., Sanford, Fla.

Cushioned baffles or "pads" are installed from side to side in a side-unloading citrus fruit trailer. There are 16 of them set at 20 deg angles with the tail of one pad 6 in. above the nose of the pad behind. They're

halfway up the 4-ft sides and support the weight of the upper half of the load. Without the pads, fruit on the bottom gets so packed it comes out cube-shaped.

When the continuous row of doors

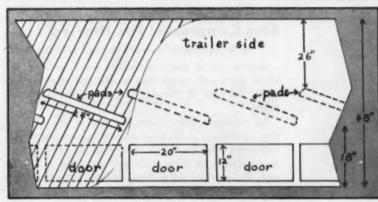
along the side of the trailer are opened, fruit rolls out by gravity. As the bottom of the trailer empties, the upper half of the load tumbles down between the pads, then out the doors.

The boffles are 92 in long and 24

The baffles are 92 in. long and 24 in. wide. They're made of 1-in. plywood in a frame of 1½-in. angle iron from 3/16-in. stock. Across the middle is a flatbar tackwelded to the angle irons as bracing. Tops of the baffles are padded with a 2-in. layer of rubberized hair covered with heavy vinyl plastic sheeting. Angle irons are also covered.

The baffles rest on cleats fastened to the trailer sides, are easily removed for cleaning or when the trailer is used for other jobs.

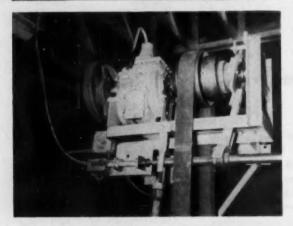
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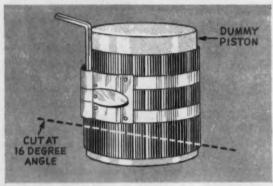


Shop Hints, continued from page 97









Back-up Horn Is Automatic

From the shops of McGuire & Hester, Oakland, Cal.

Automatic back-up horns are installed on 10-wheel dump trucks to warn anyone in the rear that the truck is backing up to dump. Horns cost about \$1 each from a local wrecker and are mounted on the rear cross member. A heavy duty flasher unit on the firewall blows the horn intermittently when the truck backs up.

An "on-off" button, such as a refrigerator door switch is fastened to a section of angle iron mounted on top of the transmission (see arrow). Button is positioned so that it's automatically depressed whenever the driver shifts into reverse. The device is wired through the ignition lock.

Die Cleans U-Bolt Threads

From the maintenance shop, City Garage, Orlando, Fla.

This shop-built die tool cleans and regrooves U-bolt threads without having to spread the bolt to get it into a regular mounted die.

The grooving die is inserted in the end of a short piece of 4-in. pipe. It's held in place by a set screw which works through a nut welded over a hole drilled in the pipe. Die handle is 1-in. pipe welded across the top end of the larger pipe.

U-bolt to be cleaned is set in a vise. Die is run down each end of the U-bolt.

Transmission Runs Shop Lathe

By Harry J. Miller, 991 42nd St., Sarasota, Fla.

We get a simple and inexpensive drive for our shop lathe and other machine tools by using the transmission from a junked vehicle.

The transmission gives the needed speed changes, as well as reverse. An angle iron frame supports the unit and the cone pulley. The electric drive motor is mounted on the frame at the rear.

Ring Compressor Fits New V-8's

By George Lynch, George's Garage, Asheville, N. C.

Regular piston ring compressors won't work on the newer V-8's with wedge-type combustion chamber because the tops of the cylinders are machined at an anale.

To overcome this problem, we took a 21/2 to 5 in. ring compressor, clamped it around a used piston and hacksawed one side of the compressor off at a 16 deg angle. This is the same as the cylinder angle on the '58 and '59 Chevrolet V-8's. Now, by just flaring the edges of the compressor, piston installation is easy.

VOLVO, Sweden's largest industrial firm, is entering the U. S. truck market with a full line of diesel trucks.

In stock and ready for immediate delivery at truck division headquarters, Newark, N. J., are three basic conventional models. They range from 22,000 to 32,000-lb GVW and 40,000 to 68,000-lb GCW. All are powered by one of four Volvo 6-cyl diesel engines ranging from 90 to 185 hp (see table). They are 4-cycle engines fitted with Bosch or CAV fuel systems.

Coming soon will be cab-over-engine models (50-in. bumper-to-back-of-cab dimension) with identical ratings as well as a still smaller truck bringing diesel power to the 1½-ton range.

Volvo is no Johnny-come-lately.

Its first car was produced in 1927. Its truck line and diesel engines have gained recognition over many years in principal world markets. The only things new are certain adaptations for the American market and a determination to serve that market with the utmost in service facilities.

Already Volvo Import, Inc., has established the separate truck division at Newark—complete with a full line of replacement parts and special tools. In addition it has dealerships in the Middle Atlantic region with more being signed daily. All of them will have full service facilities, minimum parts requirements and immediate access to Newark stocks.

Later it is expected that the

dealer organization will be extended throughout the United States (there are already more than 400 Volvo passenger car outlets). But the company emphasizes the entirely separate truck division activities with an eve on efficient truck service.

Recently COMMERCIAL CAR JOURNAL Editors had a chance to get a first hand look at the full Volvo line. One overall initial impression stands out. Volvo is a trucker's truck. The big conventional models are not "pretty" but they are practical. The smaller COE units (available currently only in gasoline power but designed specifically for diesel application) are of extremely attractive as well as practical design.

Looking over the conventional models you get the impression that the cab is plastic. It isn't, but there is no metal thump when you bang on a door panel. Quickly you learn the answer: A full inch of special insulation completely surrounding the all-steel cab. When you shut the door it sounds better than the highest priced car. Next you lower the window, find that it is spring-loaded, goes the whole distance with an easy half turn of the crank.

The sloping alligator

hood on each model combined with a bumper step provides easy access for service operations. In addition side panels and front fenders are each quickly detachable for major work. The under-hood compartment has been designed to house full-sized oil filters and air cleaners, the latter equipped with a fresh air intake from behind the radiator grille.

(TURN TO PAGE 242, PLEASE)



Tractor is Volvo Model No. L495 rated at 32,000 lb GVW, 68,000 lb GCW. Model No. L375—dump track version is shown here—is rated at 22,000 lb GVW, 40,000 lb GCW



Volvo Enters U.S. Truck Market

The Trucks . . .

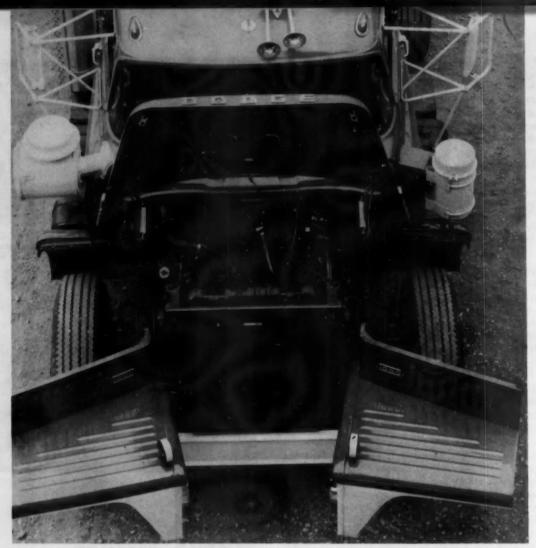
Model No.	Max. GVW	Max. GCW (lb)	WB range (in.)	Standard engine
L375	22,000	40,000	134-185	D47A
L485	28,000	65,000	134-206	D67C
L495	32,000	68,000	134-205	D968

The Volvo Line in Brief

The Engines . . .

Model No.	No. Cyl	Disp. (ou in.)	Comp. Ratio	(@ rpm)	(lb ft @ rpm)
D47A		287	17-1	90 @ 2900	203 @ 1400
D67C	6	411	17-1	115 @ 2400	200 @ 1200
D068		585	17-1	160 @ 2200	427 @ 1100
TD96B1		565	17-1	165 @ 220C	827 @ 1400

^{1—}turbocharged.



New cab-forward design has fenders hinged at front that swing out for engine service accessibility as

shown above. Tractors with new cab measure 89% in. BBC, pull a 35-ft trailer within 45 ft overall

Dodge Adds Diesels for 1960

Also there's a new cab-forward design measuring 89¾ in. BBC. Its fenders swing out to give service accessibility DODGE TRUCK FOR 1960 is highlighted by addition of diesel-powered models, a new cab-forward design, higher gross weight ratings . . . up to 53,000 lb GVW, up to 76,800 lb GCW.

New cab-forward design is aimed at operators who want a shorter tractor than conventional models without going to a COE. It measures 89¾ in. front-of-bumper-to-back-of-cab.

Dodge says it pulls 35-ft trailers within a 45-ft



Diesel models offered include KC800 shown here. With maximum GCW of 50,000 lb, it has Cummins C-175 engine



Loading here is a Model No. CT800 with new cab-forward design and 10-cu yd Heil body. Rating is 45,000 lb GVW

Model No. D500 with 12-ft van body carries 19,500 lb GVW rating with wheelbases ranging from 129 to 193 in.



overall length . . . or 40-ft trailers within 50-ft overall. Centerline of front axle is 28 in. from front-of-bumper to maximize payloads in bridge formula states.

New cab-forward design gives excellent engine service accessibility. Front fenders and engine compartment sides are hinged at the radiator, swing forward 110 deg. Alligator-type hood opens to a full 90-deg vertical position.

Power plants offered in the new line include four diesels and 11 gasoline engines. Diesels are from Cummins, include the following models...

- C-175—175 hp, 464 cu in. displacement, 406 lb ft torque.
- NH-180—180 hp, 672 cu in. displacement, 504
 lb ft torque.
- NH-195—195 hp, 672 cu in. displacement, 533
 lb ft torque.
- NH-220—220 hp, 743 cu in. displacement, 605
 lb ft torque.

The C-175 is a turbocharged model. Others are naturally aspirated.

Gasoline engines offered range from 113 to 228 hp. Five new V-8's for medium and high tonnage models include . . .

- Three engines of 361-cu in. displacement rated at 178, 194 and 204 hp.
- Two engines of 413 cu in. displacement rated at 217 and 228 hp.

Features of these new engines include tri-metal bearings, sodium-cooled stellite-faced exhaust valves, water-heated intake manifolds. Oil cooler for longer engine life is standard on the 204-hp 361-cu in. model, on both the 413-cu in. models and on the C-175 and NH-220 diesels. It's optional on the NH-180 and NH-195 diesels.

Mufflers on medium and high tonnage truck models have all internal parts aluminized, including baffles, tubes and hot-area liners, for longer muffler life. Automatic radiator shutters are standard on diesel-powered models, optional on heavy-duty gasoline-powered trucks.

Additional features of the medium and heavy-tonnage models include . . .

- New transmissions—Model No. 541 New Process 5-speed, Clark Model No. 301-V, Spicer 6000 Series, Fuller eight and 10-speed units. On 500, 600 and 700 Series truck models equipped with the 361-cu in. engine, the 6-speed "Torqmatic" automatic transmission is available. It features a built-in hydraulic retarder.
- New frames—New standard frames for 800, 900 and 1000 Series truck models are of heat-treated chrome manganese steel. Dodge says they're lighter and 122 per cent stronger than carbon steel frames.
- New clutches—Trucks with the 413-cu in. engine with 4-barrel carburetor have a new 13-in., 2-plate clutch. With the C-175 diesel engine, clutch is a 15-in. single-plate model. On NH Series diesels, a 14-in., 2-plate model is standard.

"Sweptline" pick-ups are available in $\frac{1}{2}$, $\frac{3}{4}$ and 1-ton models. Body lengths range from $6\frac{1}{2}$ to 9 ft and payloads from 1775 to 3475 lb. Body cubage ranges from 59.7 to 84 cu ft. Engines for these include a 120-hp, 6-cyl or a 200-hp V-8. Brake lining area, says Dodge, is large—191.8 sq in.

There's also a Town Panel on an 108-in. wheelbase with 53-in. interior height. It uses same powerplants as the Sweptside pick-ups. Another version, the Town Wagon, is a station wagon on a truck chassis. It's designed for work crews, off-highway work. It carries up to eight passengers on three seats. Removing the two rear seats gives 155 cu ft. of load space.









Ford Offers Over in 1960

Ratings range from 4600 lb

FORD'S 1960 truck line includes over 480 models ranging up to 51,000 lb GVW . . . 76,000 lb GCW.

Eight engines are offered, from the 223-cu in. 6-cyl on up to the 534-cu in., 270-hp V-8.

While there's been no overall revision in the line, Ford has made several important and interesting changes and additions.

The 6-cyl powerplant features new rotor-type oil pump giving, says Ford, 54 per cent more oil at 600 rpm. New oil filter assembly is said to boost filtering efficiency "at least 20 per cent," and also have 50 per cent greater element strength.

Also on this engine, a new neoprene-coated gasket and new rim hold-down bolts give a more effective seal. Crankshaft knurling has been added in the rear oil seal area for better oil retention.

Improvements in the seven V-8 engines include double neoprene-coated gaskets on the rocker covers, new oil pump relief valves, more durable oil pump drive shafts, new piston rings—including the oil control rings. V-8's also have new oil filter assembly and crankshaft knurling as on the six. The 292-cu in. V-8 has had its combustion chamber revised to boost fuel economy.

Ford's 1960 line of trucks is divided four ways—light, medium, heavy and extra-heavy models. The heavies and extra-heavies are offered in over 200 models including conventional, tilt-cab COE's and tandem-drive models. GVW ranges from 22,000 to 51,000 lb, GCW from 35,000 to 76,000 lb.

F700 through F1100 models offer three new front axles, six new rear axles in either single or two-speed versions. GVW's for these models have been increased 2000 to 3000 lb over '59 models.

Formerly available only on 1000 Series models, the 477-cu in. V-8 engine is optional on the 950 and the 1100 Series. The 534-cu in. V-8 (largest of the truck engines) is optional on the 1000 Series.

480 Models Truck Line

GVW up to 76,000 lb GCW

COE tilt-cab models offer six added optional rear axles giving a 1000 to 3000lb boost in GVW ratings over present models. These trucks are also available on special order

with tandem axles and rated from 37,000 to

51,000 lb GVW.

Other features of the 1960 heavy and extraheavy duty trucks include stronger two-speed axle shift mechanisms, improved fuel pumps, and vacuum or air-actuated thermostaticallycontrolled radiator shutters on "Super Duty" models.

Medium and heavy-duty truck front axles have nylon king pin bushings.

Ford's light and medium trucks come in six series, over 200 models. GVW's range from 4600 to 21,000 lb. More powerful heater motor has been added, says Ford, to give faster cab warm-up and improved warm air feel. It delivers 175 cfm. Drive line center bearings now have neoprene seals.

F100 pick-up has been given greater frame rigidity for greater chassis durability, better ride in rough service. There's a choice of six pick-up bodies in 61/2, 8 and 9-ft lengths with up to 80 cu ft capacity.

Available on the F100 and F250 trucks is a non-slip locking-type differential for maximum traction on ice, snow, mud, sand, loose gravel.

Standard F600 frames have been made stronger with more rugged rear spring brackets. Newly engineered brakes on these models, says Ford, give 10 per cent better deceleration, 20 per cent longer lining life. Ford offers 10-22.5 tubeless or 9-20 tube-type tires on both front and rear wheels on these trucks.

Also offered in the F600 line is an optional 21,000 lb GVW package, including a new heavyduty frame with 40 per cent greater section modulus.

Exterior finish on the entire line is Ford's "Diamond Lustre" enamel. The no-polishing finish is available in nine colors. Interior trim choices-standard and optional-include more than a dozen combinations.



GMC Combines 48-in Tractor With V-6 Diesel Engine

MC HAS combined its 48-in, tractor with its V-6 diesel engine to produce a new lightweight power

It comes in two models. Model No. DFR-8000 has its front axle set 28 in. from front bumper, Model No. DLR's front axle is set back 50 in. Both are rated at 61,000 lb GCW. With optional heavy duty 2-speed rear axle, the rating goes to 76,000 lb GCW (as in the doubles train illustrated).

Engine is GM's Model No.

6V-71 diesel. This direct injection, 2-cycle, 6-cyl powerplant has 41/4 x 5-in. bore and stroke, 17:1 compression ratio, 425.6-in. displacement. Gross rating is 189 hp @ 1800 rpm. (For full mechanical details, see Aug., page 114).

Tractor highlights include the new 696-lb aluminum tilt-cab, a fabricated frame that cuts 300 lb from previous designs, air suspension, elimination of front axle through independent front wheel suspension. (See Nov. '58, page 63, for a full description.)

With air suspension, height

remains same regardless of load, permits fifth wheel and trailer floor to be lowered by three inches. This allows an added 70 cu ft of capacity in a 35-ft trailer.

Brake regulating valve divides braking effort between front and rear wheels in proportion to the load on the axles. (For details on this "modulated" braking system, see Mar., page 106). Brake system together with air suspension gives smooth, level ride characteristics loaded or

Tractor is designed for 18,000 lb load on rear axle, up to 11,000 lb on front wheels.

Tilt-cab hinges on two front supports. Torsion spring counterbalances weight of cab so only slight effort is needed to lift it. Structural aluminum panels are riveted. Non-structural parts, such as the grille, are fiber-glass reinforced plastic. A sleeper cab is available as an

Diamond T Describes

Three New Trucks Three New Gasoline Engines

DIAMOND T IS producing three new truck models rated from 21,000 lb GVW up to 60,000 lb GCW. They're powered by three new gasoline engines.

Engines are 6 cyl, valve-in-head models of "square" (bore and stroke the same) design. Model Nos. DT6-145 and DT6-170 have 4½ x 4½-in. bore and stroke. The DT6-145 is rated at 145 hp @ 3200 rpm, 270 lb ft of torque. The DT6-170 is rated 170 hp @ 3400 rpm, 297 lb ft of torque. Third engine, the Model No. DT6-185, has 4½ x 4½-in. bore and stroke. It's rated 185 hp @ 3400 rpm, 320 lb ft of torque.

New vehicles are designated as the

Model Nos. 534, 634 (in photo) and 734R. Standard on the 534 is the DT6-145 engine, Timken 31116 front axle, Timken H140 rear axle, New Process 540 transmission. It's rated at 21,000 lb GVW. 35,000 lb GCW.

The 634 has the DT6-170 engine, Timken FC-901 front axle, Eaton 1790A rear axle and Clark 291V transmission as standard. It's rated at 25,000 lb GVW, 50,000 lb GCW.

The 734R offers as standard equipment the DT6-185 engine, Timken FD-901 front axle, Eaton 18803 rear axle and Clark 291V transmission. Rating is 30,000 lb GVW, 60.000 lb GCW.



On the 534, Eaton-Hendrickson

22M and 28M tandems are offered. On the Model 634, Eaton-Hendrickson 28M, 32M and 34D are available, with either Hendrickson RS or RT suspensions. In addition, the Timken SLHD lightweight tandem with either Timken suspension or the lightweight Hendrickson RSOA-320 with aluminum beams and saddles may be specified.

On the 734R, available tandems include Timken SLHD and SQHD, Eaton-Hendrickson 32M and 38D. These come with Timken suspensions or Hendrickson RT322, RT365, RSO-320, RSOA-320. For severe service, Timken SQDD is available.

All-steel welded cab has heavy duty three-point suspension. Mounting brackets are an integral part of the reinforcing frame welded to cab floor. "Solex" glareabsorbing windshield is standard.

New White 2000 Series Is Rated up to 40,000 lb GCW

WHITE'S NEW 2000 Series comes in both truck and tractor models rated up to 40,000 lb GCW.

Standard engine is White's Model No. OA-130 gasoline powerplant developing 130 hp @ 3300 rpm, 230 ft lb of torque @ 1600 rpm. The Model No. OA-145, rated 145 hp @ 3200 rpm and 270 lb ft of torque @ 1600 rpm, is optional.

The new medium-weight trucks come with wheelbases of 150, 170 and 185 in., measure 85%, 105% and 120% in. from back-of-cab-to-centerline-of-rear-axle (CA) respectively. Tractor models have 130 or 150-in. wheelbase with 65% and 85% CA dimension respectively.

Standard transmission is the Model No. 205V 5-speed unit with Spicer 3152 5-speed or Fuller R35 7-speed optional. Standard clutch is 12-in., single-plate dry model with 13-in. optional.

Front axle is Timken 32500 reverse Elliot type of 6000-lb capacity used with a Model No. TA-26 steering gear. Optional front axle is Timken FC-901, also a reverse Elliot type, with 7000-lb capacity. It's used with a Model No. TA-70 steering gear.

Timken H-140 single-reduction with 16,000-lb capacity is standard rear axle. Optional is Tim-

ken H-240 double-reduction or Timken H-340 2-speed axle. Both are rated at 16,000-lb capacity.

Standard frame is single channel 9 x 3 x % in. Heavier frame, 9% x 3 1/16 x 5/16 in., is standard on 185-in. wheelbase models, optional on others.

Engines are valve-in-head models with wet-type replaceable cylinder sleeves, sodium-cooled exhaust valves, stellite-faced exhaust valve seats.



CONSTRUCTION FLEET MAINTENANCE

Compiled by the Editors of COMMERCIAL CAR JOURNAL

AT YOUR SERVICE . . .

Engine lube oil filters and

filter housings installed on some vehicles hold as much as three and one half gallons of lube oil. This amount is about one third of the crankcase capacity of the engine. Obviously, when these filters are removed and the filter housings drained during lube oil filter changes, a lot of oil is removed from the engine's crankcase. While it is true that, generally speaking, these filters are normally replaced at the same time the engine lube oil is changed, there can be occasions when the lube oil filters alone are replaced. If lube oil filters are replaced between lube oil changes, be sure to replace the oil removed from the engine's crankcase. Indeed, if this oil is not replaced, the oil level in the engine's crankcase will be dangerously low. Moreover, the crankcase should always be checked again, without fail, after a few minutes of operation to make sure that the lube oil is at the correct level on the dipstick.

Some engines used in

construction equipment have thrust plates for adjusting end play on camshafts, idler shafts, and water pump shafts. The Hercules TDX series is an example. Others use screws and lock nuts. On these, the adjustment is as follows:

Loosen lock nut and turn adjusting screw in until it contacts thrust plug in the respective shafts. Then turn screw out approximately ½ turn. Be sure to tighten lock nut securely.

If the engine is equipped with thrust plates, shaft end movement is adjusted with shims placed between gear cover and thrust plate. Remove shims to decrease end play.

Magneto failures on air-cooled engines

can be caused by wrong spark plug gaps. According to a factory bulletin, this is the largest single cause of premature failure. Plug gaps on magneto-equipped engines should be checked frequently and regapped according to factory specifications.

Wiping oil and grease off the magneto, lead wires and spark plug insulators will improve engine operation. Don't make the mistake of lubricating

new tractor tracks because they seem stiff. Stiffness in new tracks disappears as they wear in. Greasing them only carries abrasive dirt between pins and bushings, causing abnormal wear.

Tracks, new or old, must be properly adjusted. A track should have from 1½ to 2 in. of slack. Loose tracks cause excessive pin and bushing wear. Tight tracks puts an added load on pins, bushings, sprockets and idlers

Bearings used on feeder headshafts

in aggregate production plants, gear countershafts, and other similar construction equipment, require mechanical care for a long life. These bearings are usually babbitt or bronze. Besides lack of lubrication, chief enemy of this type of bearing is misalignment. Bearings and pillow blocks must be carefully aligned when they're installed and should be checked for alignment frequently.

Factors in premature failure include improper fit at time of installation, burrs on the shaft and split bearings incorrectly shimmed.

Pillow blocks which depend on a slotted hole and fastened with a nut and washer, will move in use. Weld a lug on the block and use a machine bolt and locknut to hold the pillow block against the side pull. This will help keep alignment.

There is evidence on any

construction job that the maintenance department believes in signs. A sign in one of the service bays of the Guy F. Atkinson Co., directed at Euclid truck drivers reads: "We check your tachometer every day. Make sure it never reads over 2100 rpm. Explain it the first time, if you can. The second time, you draw your time."

A couple of signs on the Morrison-Knudson-Kaiser-F. & S. Co., Navjo Dam job also make interesting reading. In the shop is this sign: "This is the House of Correction. We do not guarantee SAT-ISFACTION—we guarantee ACCURACY."

Another on the loading dock, makes unloaders careful about placing the gas cylinders on the dock instead of leaving them on the ground for someone else to load: "Place bottles on the dock or join the ranks of the unemployed." A toolroom sign on this job reads: "Return tools at end of shift or draw your time."

Special Crane Shed Speeds Repair of Heavy Equipment

Six hoists in pairs provide versatile rig for heavy lifts, precision aligning

SPECIAL SHED for rebuilding cranes and oversize equipment is provided at Cone Bros. Contracting Co., Tampa, Fla. There are two stalls. Each stall has a cross-frame at the top carrying six 2-ton spur-geared chain hoists.

As shown by the squares in the diagram below right, the hoists are in pairs. One pair is on a long I-beam running over the center of the stall and extending out into the yard. These two hoists are free to move the full length of the beam.

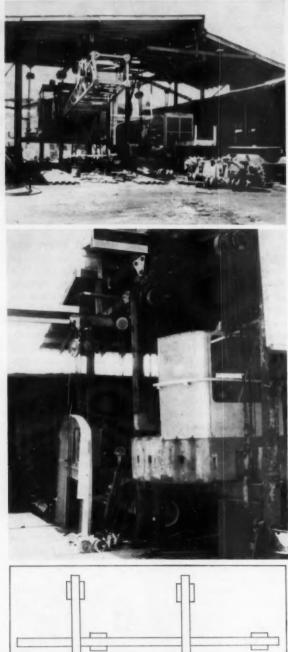
Two cross beams have hoists at either end. Since these beams are above the center rail, their hoists move only from the edges of the stall to the center

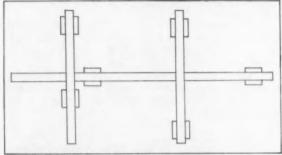
Sometimes there is no place to hook onto a piece of equipment with a hoist. Then a kind of sling is made of a section of I-beam (see photos). This has a large clevis fastened at each end. The beam goes under the equipment to be raised and the clevises are hooked onto a pair of the hoists.

Such a sling is particularly useful in raising a large crane turntable clear of its undercarriage. While the undercarriage is removed and worked on, the sling beam is let down on temporary jacklegs. These support part of the weight as a precautionary measure, though the hoist chains are kept taut.

Having a battery of hoists in a stall also makes possible the quick alignment of two parts of field equipment, such as in coupling an engine to a generator. The two parts are carefully positioned by hoists until all matching parts are fully aligned and fitted without forcing. With trailer or undercarriage already leveled, shims are inserted as needed, and the hoists slacked off. If the alignment stays true, the rig is bolted together.

Principal merit in this method is that shimming is made in a few large pieces-or even one piece. It solidly supports the component bases on the trailer or undercarriage, thus reducing the twists and vibrations that speed wear on coupled units.





Some shops might think Cone Bros. too fussy in their striving for stress-free alignment. But, aside from neglected lubrication, it claims nothing gives more wear and trouble in the field than poorly aligned parts.

Welders Need PM Service, Too

They're a work horse when it comes to construction equipment maintenance, so take care of them. Here are some tips on trouble-shooting engine-driven direct current models

ONE WORK HORSE in construction equipment maintenance is the 200 to 300-amp portable, enginedriven, direct current, welder. It too should have regular PM maintenance to lengthen its useful life and insure its being always ready for the job.

Here's a review of some maintenance rules for welders as well as some suggestions for repairs when certain symptoms show up. Most of these have been compiled by Lincoln Electric Co., Cleveland, Ohio, but they apply almost to all generator-type welders.

Welder and controls should be

blown out with compressed air once a week if the job's dirty, every two months under best conditions. Low air pressure is best since it avoids driving dirt into the insulation.

Current control contacts on Lincolns are self-lubricating and should not be greased. When contacts need cleaning, rotate current control through entire range frequently. Best plan is to turn handle from maximum to minimum setting twice each morning before starting to weld.

Watch the duty cycle of your

welder which is usually stated in the name-plate or in the instructions. A NEMA rating of 200 amp at 40 arc volts on a 60 per cent duty cycle, means that you can safely weld at the rated output of 200 amp six minutes out of every 10-min period.

Do not remove cover on commutator while welder is running. Remove when idle to inspect brushes. Replace brushes when worn to ¼ in. of the pigtail. Always keep one or two sets on hand. After installing new brushes, lightly stone the commutator while the armature rotates at full speed so new brushes make full contact. Blow out with low pressure to remove sand and carbon dust.

While commutators require

almost no attention, they should be cleaned occasionally with a clean rag, or while running with fine sand-paper. Never use emery cloth or paper.

Know the manufacturer's recommendations for lubricating the generator bearings. On the Lincoln, double-shield ball bearings are used and packed with sufficient grease for five years but nevertheless these bearings should be given ½-ounce of grease annually.

How much is half an ounce? A pad of grease one inch wide, one inch long and one inch high weighs about one half ounce. Make sure these bearings are never over lubricated.

If you have placed a new welder in

service, be sure to go over it after a week or so of operation and check tightness of all internal and external connections.

When a welder has been in service for a long time, it can develop some malfunctioning symptoms. Here are a few and suggestions as to cause or correction...

"Heat" fluctuates. When machine

fails to hold "heat" properly it can be caused by a rough or dirty commutator which needs trueing or cleaning. Worn brushes may need replacing or brush springs may be broken.

Field circuit may have a variable open circuit due to loose connection or broken wire. Check main generator and exciter with ammeter to discover if current varies.

Most likely cause of heat fluctuation is poor connection to work or electrode lead. The remedy is to tighten or, if corroded, to remove and reinstall.

Another cause is that field rheostat may be making poor contact and overheating. The remedy is to clean and adjust finger tension on contact.

No welding current. If welder starts

but fails to generate current, look for loose or missing generator or exciter brushes. Make sure all brushes bear on commutator and have proper spring

Exciter may not be operating. Check its output voltage with voltmeter or lamp. Field circuit of generator or exciter may be open. Check for open circuits in rheostat, field leads and field coils.

Exciter may have lost excitation. Flash field with a storage battery or another generator, first with one polarity then with other to see if it builds up. Series field and armature may have an open circuit. Check circuit with a ringer or voltmeter.

Welding arc loud with excessive

splatter. Current setting may be too high or polarity may be wrong. Check setting and current output with an ammeter. Check polarity. Try reversing polarity or try an electrode of the opposite polarity.

Welding current greater or less than dial indica-(TURN TO NEXT PAGE, PLEASE)

Welder PM Service

Continued from page C3

tion. This is usually the result of low exciter output compared to dial indication. Check exciter field circuit.

Arc continuously pops out.

On other than continuous current control types, selective current control switch may be set at an intermediate position. There are generally several positions. The selective current control switch should never be set between any of the designated points. Such setting would cause overheating and arcing of contact points as well as to cause the arc to pop out continuously. Just remember that this is the rough setting.

Do your fine tuning on the "continuous voltage control" by which you can obtain exactly the current you desire. For example, for 175 amp and a forceful arc, set current control at 200 and turn the voltage control down to 175 amp. For 175 amp and a soft arc, set current control at 150 and raise voltage to get required arc.

Some types of electrodes have

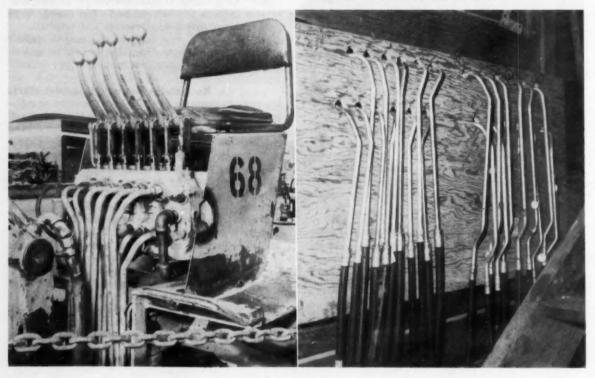
an inherent tendency to pop out. Set voltage control as high as possible for whatever current setting is used. This gives a soft arc and a high open circuit voltage. For vertical or overhead work you want a low open circuit voltage which gives a snappy digging arc.

Arc won't strike, Such a condition is usually caused by misadjustment of the idle screw on the engine. Check your operator's manual. Common cause is that the idle speed is so low that the idler fails to operate when arc is struck. Idle speed should be adjusted for 950-1050 rpm.

Shop Board Speeds Field Hose Replacement

McGuire & Hester, Oakland, Cal., speeds replacement of hydraulic control hoses on its back hoes with a hose

board (shown below right). Position in the board matches position on the back hoe. When an operator in the field reports he needs a hose, he identifies it as "top row, third from left." Correct hose then can be sent out.



WHEN IS A seal not a seal? When it leaks. What makes it leak? Some times you do. Present day spring-loaded oil seals are in the full sense trained seals because they are made to do one job well. Here is a collection of handy tips on installing seals so they give long life without leaking.

1. The correct seal for

the job must be used. There may be some possible variation in materials, especially if the seals are made for a particular application. Seals come in rawhide, synthetics, O-rings, special seals for abnormal operations. Prime factor is to use correct seal for the application.

2. Seal lips usually must be

installed toward the lubricant. Seals come in single lip, double lip, single lip with felt wipers. Equipment that works on steep grades requires better seals since the liquid will rise higher than the seals.

3. Wheel seals are usually

installed with lip outward from the lubricant. This is not from a special brand of cussedness on part of the designer, but so the foreign matter can be worked out as the lubricant "weens."

4. Of all the causes that

make new seals leak after installation, we must place the responsibility on the human element—distortion, dirt or other error when installing. Seal drivers should be either made or purchased to aid in starting square.

5. Preparation of the seal is

important. Manufacturers' directions must be followed. Most seals should be submerged in oil before installation, but there are seals which contain a special lubricant and which should not be oil soaked.

6. Damage to new seals can

occur in sliding them over splined shafts without a protecting sleeve. Use a piece of shim stock or a heavy paper to make a roll to slide over the splined shaft. Lubricate the seal and carefully slide it over

How to Train Seals Not to Leak

Your problem is not getting them to balance a rubber ball on the end of their nose. Yours is to keep them from leaking oil. Here's a 9-point check list that may help you do a better job......

the shaft. Use a flat-faced tool to drive against outside of the seal to drive it into its retainer. If the application permits pressing seal into its retainer and then sliding the assembly in place, so much the better. This cannot always be done as sometimes the retainer is a counterbore in a housing.

7. Drive seal with pressure

applied evenly around its circumference. Even a properly designed seal driver is no insurance that the seal is started evenly. The skill of the mechanic must insure this.

8. Another common cause of

leaking after new seals have been installed is worn shafts. Unless a shaft is concentric and has minimum end play, the seal cannot hold.

9. Another circumstance where

existing seals may be damaged is when a shaft is installed through a seal already in place. Damage to the seal is likely to result if the weight of the shaft is allowed to bear on the seal. The shaft should be suspended to prevent its weight from damaging the seal.

World's Largest Rim!

Miss Pat Casey, a secretary for Goodyear, looks over the world's largest rim. It's made by Goodyear for giant construction equipment. Rim weighs 2058 lb, is over 3 ft wide and 4 ft in diameter and outweighs Miss Casey and the Volkswagen. Rim mounts a 44.5-45 tire weighing almost two tons.



Wire Rope Care

Cuts Localized Wear Problems

Here are some points you should remember when cutting off ends or reversing them. They'll pay off with longer rope life

LOCALIZED WEAR IS often a problem in wire rope care. Here are some tips from the Leschen Wire Rope Division, H. K. Porter Co., on how to prevent it . . . or what to do when you run into it.

Wire rope is usually subjected to its most severe wear at only one or two points. If this wear is allowed to continue, the entire length of cable will have to be replaced. When wear is more uniformly distributed, the rope lasts longer and rope as well as downtime costs are reduced.

Redistribution of wear can

usually be easily managed by cutting back at the spool or reversing ends. Whenever rope must wind onto a drum in two or more layers, wear will be unevenly distributed no matter what has been done to improve winding efficiency. If the rope remains in the same position on the drum throughout its whole service life, the same sections will always be subjected to the most severe wear.

Remedy is to remove the damaged section and move it to a point of less wear. Usually this can be accomplished by cutting off a length equal to 1¼ wraps and reattaching the rope to drum.

This advances cross-overs a full 90 deg around the drum, brings a new section up to the change-of-layers point. The critical points of severest wear are thus advanced to relatively low wear areas. These measures should be taken before worn sections show much greater deterioration than the rest of the rope.

Not all localized wear takes

place at the drum. Fatigue damage is common at the load end. Here wear is caused by torsional stresses due to changes in tension, or by bending which results from vibrations being dampened at the attachment. While this condition can occur with any type of attachment, it is particularly common where sockets are used.

Remedy is to cut off and discard a section of rope adjacent to the attachment at regular intervals, spaced often enough to limit damage to just a few broken wires at most. If the attachment is a socket, at least six feet should be cut off.

Cut-off must be done often enough so that the rope is never sufficiently damaged at any point to make the operation dangerous. Enough rope must be cut off each time so that no part of the rope previously exposed to severest service will be exposed thereafter.

Because of the important possible savings from cutting back, it is well to order rope long enough so that a number of cut-offs can be made before it is too short for the application.

Reversing ends is a method often

used. However, this cannot be done when wear areas are in the middle, a common condition of rope use on some equipment.

If switching ends is the proper procedure for your job, use the utmost caution in unreaving and reinstalling. Recommended procedure is to wind the entire rope onto the drum and then carefully transfer to a reel. If the rope feeds on top of the drum be sure to feed it on top of the reel. If it is an underfed drum, then rope should feed under the reel. Maintain sufficient tension to prevent kinking and spool it in even layers.

When rope is being put

back in service, it should be lubricated. This is a good time to do it, and it may save lots of time later.

To lubricate, clean thoroughly with wire brush, scrapers, compressed air or superheated steam. The recommended lubricant may be applied with a stiff brush, or saturated waste, or by drawing the rope through a trough, or dripped on from a spigot in a drum. Excess lubricant should be wiped off as rope is fed back into service.

FEW CONSTRUCTION machines are as simple as the centrifugal pump. It is portable, easy to operate, has few moving parts, easy to maintain . . . and, for these reasons, is often neglected.

A self-priming contrifugal pump needs regular service to keep it in working order. Simple though it be, its failure to work—particularly on high lifts—can be a mystery to the operator unless he understands that these pumps cannot handle air and liquid together.

Even small amounts of air

shorten the lift. Reduction of lift and capacity is the tip-off that a bad condition is being born.

These few points will help you discover the trouble. Most low capacity or lack of lift troubles are caused by outlaw air which may enter at suction line or line couplings. Another common trouble is rubber hose lining that pulls loose and clogs up the line.

Shaft seals are designed to

keep air from leaking in and water from leaking out. Since these seals operate under running friction they eventually wear out and must be replaced. Worn seals cause erratic priming or failure to deliver water in rated amounts.

Some ring seals are designed for lubrication with grease and others use the liquid pumped as the lube. Manufacturers' directions should be followed for best results.

On other types, the stuffing box may require installation of new packing. Since in most uses the liquid pumped will be cold or hot, there is one packing for cold water and asbestos packing if the liquid is hot.

Stuffing boxes when repacked may be expected to leak. Permitting a small leak for a short time may help lubricate and shape the packing. Later the gland should be drawn down and another ring of packing may be needed.

When pump does not prime properly, check recirculating port for dirt or sand clogging. If recirculating chamber is cleaned every three to six months, the port is not likely to become clogged.

White's Util-I-Deck Truck

J. T. Edwards Co., Columbus, Ohio, uses this White Model No. 3022 Util-I-Deck for hauling structural steel. With the one-man cab, body is 28½ ft long, 96 in. wide behind the cab and 62 in. wide alongside. Truck is built by White with special refinements by Mayer Pollock Co. Pottstown, Pa. Chassis is basically a White 3000 and retains its tilt-cab feature for easy access to the engine.

There's No Place for AIR in a Centrifugal Pump

Here are the places to check to be sure it's "right" when it goes out on a job

Fouled check valve will prevent proper priming. Check valve may be fouled by solids drawn up with the water which allows the self-priming reservoir to empty.

Excessive impeller clearance will cause pump to not prime properly. Excessive clearance is usually caused by wear. Most manufacturers recognize anything over 1/32 in. as excessive.

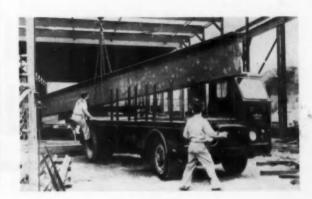
Many pumps have an adjustment for moving the impeller closer to housing. If no such adjustment is present, new impeller must be installed. Most impellers last for a year or more under normal conditions.

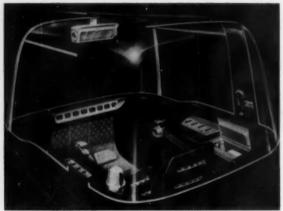
Too high a lift will prevent

pump from priming. Usually a pump should not be expected to prime if the lift is greater than 25 ft at sea level. Usually the shorter the lift the faster the pump will prime.

Pump will likely also fail to prime if the water gets too hot. The suction lift decreases rapidly as the temperature increases above 65 deg. When the water becomes too warm and the pump cannot create vacuum, the pump case may be emptied and filled with cold water to get started.

When pump does not deliver, look for a collapsed hose, excessive clearance or suction lift too high.





Cab like this appears on Ford's Typhoon II—a dream farm tractor . . . but it isn't too hard to see it on tomorrow's construction equipment. It has two-way telephone, heating, air conditioning and a radio. Hydraulic power does the steering . . . and adjusts clearance under the equipment and distance between wheels. Television screen watches equipment being pulled. There's also a food warmer, coffee maker and refrigerator. Steering is by foot pedals, leaving hands free to control operation of other equipment . . . including an electrically-operated hitch. This, says Ford, might be magnetic.

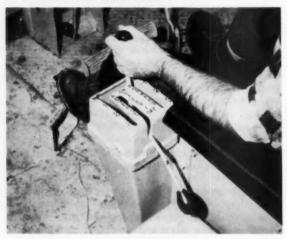


Also for tomorrow, Army has this LeTourneau-Westinghouse Tournadozer equipped to operate by remote control . . . up to 15 miles away. Controls can be mounted in a jeep, or you could add a helicopter to your equipment spread.





Gledhill now offers a 1-ton tandem roller with both forward and "backward" facing seats. Overhang is less than a 1/2-in., permitting close-to-obstruction operation.



New one-lever power-shift is available on Caterpillar D8 and D9 tractors. Other lever serves only to lock gear shift in neutral. Shift works through planetary gear set driven by engine flywheel.

Eimco's new 103 series, 100-hp tractors have torque converter drive with 4 speeds forward, 4 in reverse.



They're rolling in with the biggest news since trucks began



IGGO CHEVROLET TRUCKS WITH TOTAL NEWNESS!

Chevy's here with the hottest news for



NEW TORSION-Spring Ride

- Years in the making, it's the most significant improvement in truck performance in decades!
- It's here to lengthen truck life . . . protect cargoes . . . speed up schedules . . . reduce driver fatigue . . . cut truck maintenance costs to new lows. It's ready to save you time, work and money like nothing in trucks has before!



See how Chevrolet for '60 has engineered a revolution in trucking

one that can make any... truck route in America a far smoother road to bigger profits for you! truckers since coffee was invented!



NEW STYLE NEW MODELS

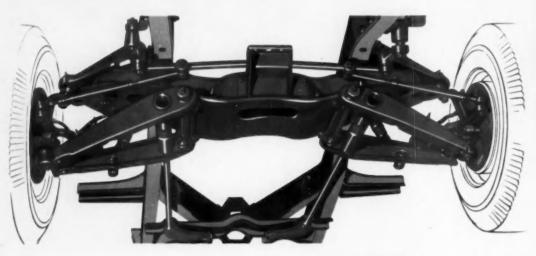
- All-new styling . . . new Comfort-King cabs with more room, convenience and horizon-wide visibility . . . new sturdier construction for longer truck life!
- Dozens of new models for '60! New bigger capacity pickups and panels, new highstyle Suburban Carryalls, new taugher built tandems and chassis-cabs! New power improvements, too!

re-designed everything to bring you a new kind of tough-truck durability and saving ability!



NEW CHEVROLET TORSI

The smoothest thing that ever came between a road and a load!



Years in the making, this amazing suspension system, featuring torsion bar springs, is standard equipment in all classes of 1960 Chevrolet trucks—in fact, it is provided in every model with the exception of forward control and 4-wheel drive! It protects everything from the bumps and jolts that used to wear down trucks and truckers... provides a totally new kind of trucking that improves almost every phase of operation!

Independent front suspension with tough torsion bar springs . . . for trucks!

This totally new development improves many phases of trucking—does more for you than any other single feature ever introduced!

Chevrolet Torsion-Spring Ride, you'll find, eliminates the old-fashioned I-beam front axle. Gone, too, are friction-producing front leaf springs. Instead, each front wheel is suspended independently of the other. And tough-steel torsion bars extend back on either side of the chassis. They assist the low-friction spherical joints and control arms in providing precise wheel action and a new kind of truck springing. Independently suspended, each front wheel steps cleanly over bumps. And the friction-free torsion bars work to absorb each jolt or jar; they flex freely, even on the smallest bumps, yet have the capacity to absorb severe shocks. The result is a truck ride so wonderfully smooth that it must be experienced to be believed!

Three tailored-to-the-truck rear suspensions.

Chevrolet's new truck-built torsion-bar independent front suspension is complemented perfectly by these new rear suspension systems.

In Series 10 and 20 models, frictionless, highcapacity coil springs cushion the rear axle ideally. Rugged radius arms and a lateral stabilizer provide precise axle control.

In Series 30* and 40 models, a new two-stage leaf spring rear suspension affords tailored springing action for all hauling conditions.

In Series 50, 60, 70 and 80 models, all-new variable-rate rear suspension provides spring resistance that adjusts automatically to assure ideal cushioning for any size load.

With these three advanced rear suspension systems, Chevrolet's new Torsion-Spring Ride adapts ideally for use in any size truck . . . brings a new, easier, more durable and profitable brand of hauling to every weight class!



New frictionless coil spring



New two-stage leaf spring



New variable-rate leaf spring

ION-SPRING RIDE!



It's the next best thing to paving every road in America!

Here's an advance that signals a new forward evolution in trucks, and puts you in the driver's seat as you've never been before!

New Chevrolet Torsion-Spring Ride, the sensational result of torsion bar suspension up front and the right kind of springs in the rear, is just as tough as it is smooth! It's truck-built through and through, designed specifically to weather the worst beating a bruising run can dish out. In fact, in exhaustive torture tests, Chevy's new Torsion-Spring suspension outlasted many sets of conventional springs!

It's here to add years to truck life . . . reduce maintenance costs to new lows . . . protect your cargoes better . . . speed up your schedules . . . save the driver from exhausting jounces and jolts!

It adds years to truck life and cuts maintenance!

Every truck component benefits from this remarkable new truck ride. The jars and jolts that used to hammer at parts and shorten working life are now cushioned by the suspension. As a result, the truck is bound to last much longer than ever before!



It protects cargoes!

Whatever you haul-from eggs to elephants-you can count on your cargoes

reaching their destinations in better shape in a 1960 Chevy with Torsion-Spring Ride. Cargoes virtually "float" over road shocks on the new suspension... and the benefits are sure to show up on your profit reports.



It saves the driver!

These new Chevies do wonderful things for drivers, as well as owners. Gone completely is the traditional rough truck ride with its I-beam shimmy and wheel fight.

Chevy's smooth-going torsion springs are designed to add years to a driver's working life, keep him fit, fresh and on the road and increase his satisfaction with his job.



It speeds up schedules!

Bad roads have always been a bugaboo for truckers. But you'll find staying right on schedule much easier in a new Chevy Torsion-Spring hauler. The new suspension cushions road shock, gives better, safer vehicle control, enables you to maintain better speeds . . . to serve your customers more promptly and profitably!

NEW STYLING, NEW M

... newly engineered for extra savings

Totally new light-duty models

Rolling in an revolutionary torsion springs, these new Chevies are smooth as silk yet tough as naiis! Their totally new performance qualities are nothing short of remarkable... and wait till you see what they do to your cost records!

Here's the longest line of light-duty Chevies ever. It offers virtually every type of truck known in this weight class—including some big new Series 40 chassis-cabs and stakes with G.V.W.'s up to 14,000 lbs. Every model comes handsomely decked out in a new kind of truck styling that works as well as it looks—adds to your safety, comfort and convenience. And every model offers a new lower-to-ground build (without sacrificing road clearance) which improves truck stability and makes cab entry easier.



Model C1434 Fleetside Pickup

Totally new middleweights!

You can choose your truck from sixty-six models, including the brand-new economy models of Series 50... haul bigger profit cargoes, thanks to G.V.W.'s up to 19,500 lbs. and stronger components!

Chevy for '60 is coming out big in the middleweight class, putting a virtual mountain of new truck muscle against your tough medium-duty jobs. Never before have components been so brawny; components such as the new frames with massive "K" and "X" braces and rigid box-section side rails that boost load-carrying ability to new highs. Or the big new standard brakes—11-inch vacuum-hydraulic power unita that assure extra braking power under all conditions. And the new suspension—with torsion-bar front springing and new variablerate rear springs—is just as strong as it is smooth!



Totally new heavyweights!

Those new torsion-spring heavy-duty trucks make mammoth hauls much easier than ever before—easier on the driver, load and truck alike! The ability of the new suspension to cushion road shocks keeps everything in good shape far longer and, as a result, your truck dollars go miles farther than ever before!

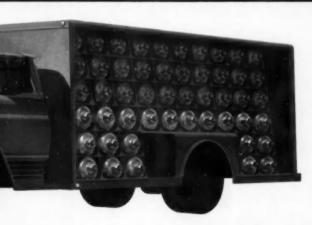
Dependability, low maintenance, minimum downtime—these are the big-truck benefits that are due to take on new and better maanings when Chavy's new heavyweights take the field in force. With their totally new ride and ruggedness, and with the latest in V8 power, they're out to slash everything that gets in the way of owner's profits. That, you'll find, is a fact—whether you use top-tonnage tandems or big conventional trucks.



NODELS!

s through extra strength!





Model L6603 LCF Chassis-Cab





NEW COMFORT-KING CABS

Chevrolet's all-new cabs for '60 fully match the revolutionary new chassis in ability to bring new ease and dollar-saving durability to your daily hauls. Special benefits turn up everywhere. For instance, in light-duty models new Chevy cabs are lower for easier entrance and exit. And there's more space in all cabs—5 inches more shoulder room, 6 inches more hip room, and more leg room and head room, too! And Chevy's new double-walled cowl, new double-panel roof construction . . . plus sturdy reinforcements throughout, provide extra rigidity, ruggedness and longer life.

New Custom Cabs! For extra ease and working style, Chevy provides totally new Custom Cabs for '60, available in all cab models. They bring you: distinctive exterior chrome moldings . . . handsome chrome grille (light-duty models) . . new Super Cushion Seat . . . sunshade, armrest, cigar lighter and control knob trim.

NEW COMPACT LCF MODELS

Twenty-six new Chevrolet Low Cab Forward models offer new highs in easy handling with short cab design that allows for maximum length trailers and extra cargo space. Short wheelbase and turning radius give exceptional maneuverability. Tractors measure as little as 90 inches from bumper to back of cab. G.V.W.'s go up to 25,000 lbs. New cab design makes entering easier. And in Series 50 and 60 models you can choose either 6-cylinder or V8 power.

and they're POWERED to improve your profit picture, too!

Chevy for '60 offers a wide choice of betterthan-ever powerplants; in virtually every Series you can choose from famous economy 6's or V8's that lead the field for efficient short-stroke design! Three big 6's and four advanced V8's with up to 230 horsepower give you the flexibility to match the engine to your job needs for top performance and economy. And these modern engines are loaded with durability features to keep them going on tough jobs.

THEY'RE THE SMOOTHEST TRUCKS EVER BUILT

New Chevrolet Torsion-Spring Ride is something you'll appreciate fully only after you've experienced it for yourself. But these comparative test results, electronically recorded, will give you some idea of what an amazing difference new Chevrolet Torsion-Spring Ride really makes . . . some idea of why it's certain to put you on a far smoother road to bigger hauling profits than you've ever known before!

Employing the very latest in test instrumentation, recording and analytical techniques, Proving Ground engineers have made exhaustive comparison studies to find out just how good the new Chevrolet ride really is. Their ride test data were compared with comfort-discomfort limits established by leading independent ride researchers, based on the individual

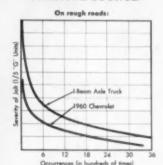


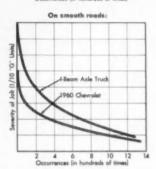
Heavily instrumented test driver prepares to make a ride run in a '60 Chevrolet truck. Strapped-on accelerometers register the severity of joits felt by test driver in both vertical (bounce) and horizontal (pitch) directions. Accelerometer readings on the '60 Chevy truck are fed by cable to a companion vehicle, where they are tape recorded for later analysis by electronic computation. The result is an accurate bump-by-bump picture of each test run.

reactions of thousands of people throughout the world.

Here's what they found out: In every respect and under every road condition, the 1960 Chevy out-rides old-style trucks by a tremendous margin! For instance, in terms of vertical "bounce," Torsion-Spring Ride eliminates as much as 78 per cent of the uncomfortable motion found in I-beam front-axle trucks! In other respects, too—pitch, side shake and sway and their effects on both driver and cargo—Chevrolet is 'way ahead on every count!

JOLTING OF DRIVER -VERTICAL BOUNCE





Ride-test data were analyzed in terms of number of jolts registered of various sizes, or levels of severity, resulting in comparison graphs like these. The shaded area between the curves represents the overall difference in ride. Thus in this example, comparing 1960 Chevrolet and old-style I-beam-axle trucks of 19,500-lb. GVW rating, Torsion-Spring Ride reduces the jolts harsh enough to cause actual discomfort by 58 per cent on rough roads and 52 per cent on smooth roads (up to 78% in light-duty models!).

...AND THE TOUGHEST!

Chevrolet's exhaustive truck-testing program proved beyond question that these totally new Torsion-Spring haulers are built to withstand punishment that would put an ordinary truck in the shop for repairs!

Here are two test reports that typify the thousands recorded during Chevrolet's unprecedented new truck development and testing program.

Chevrolet's tough torsion-bar independent suspension withstood the brutal Belgian Block test like nothing else ever has. One typical test forced the new Chevy trucks to withstand 8,500 miles of continuous travel on the Belgian Blocks—a road surface so jarring that trucks traditionally register failures of one kind or another after the first few hundred miles. Yet the newly engineered '60 Chevies completed all of

their runs with no failures of any kind!

Rough railroad tie test proved torsion bar suspension's toughness. Carrying loads far in excess of their rated G.V.W.'s—the new Chevies hit loose railroad ties (specially placed to produce maximum stress on all components) at speeds up to 25 m.p.h. time after time. Even with panic stop braking on the ties, no failures of any kind ever developed in either the torsion-bar front suspension or the three new rear suspension systems!

These and countless other laboratory, Proving Ground and field tests proved the total ruggedness and lasting ability of the '60 Chevrolet truck product beyond question. For the ride of your working life, see your Chevrolet dealer soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



New Torsion-Springs beat brutal Belgian Blocks



"Crossties" test proves suspension's durability

(All illustrations and specifications contained in this literature are based on the latest product information available at the time of publication approval. The right is reserved to make changes at any time without notice in prices, colors, materials, equipment, specifications and madels, and also to discontinue models. Chevrolet Motor Division, General Motors Corporation, Detroit 2, Michigan.)

ARI Gives Details on New Refrigeration Standard

Air Conditioning and Refrigeration Institute's new standard covers cold air circulating, constant-speed refrigeration units. Although not immediately, it won't be very long before you can buy a rated reefer unit for your rated reefer trailer

WHILE NOT IN the immediate future, it shouldn't be too long before you can buy rated refrigeration units to go with your rated reefer trailers.

Air Conditioning and Refrigeration Institute (ARI) has just released its standard covering forced air circulation units—No. 1110-59.

Fleet operators should note that this standard covers only units employing (1) forced air circulation and (2) constant speed drives. (Once the operator sets the speed, it operates at this speed, does not vary "automatically.") ARI tells COMMERCIAL CAR JOURNAL that work on variable speed units is underway. When this is completed, ARI will establish a voluntary certification program based on the standards.

How does it fit with

Truck-Trailer Manufacturer Assn.'s reefer trailer ratings (Jan. '58, page 80)? When it comes to an actual application, there'll be a little figuring to do . . . but, in general, it can be stated this way. . . .

Trailer ratings are expressed in Btu per hr of heat gain inside the trailer. Refrigeration unit ratings will be expressed in Btu per hr that the unit can pull from the trailer. If you load a trailer at zero and want it to hold at zero, you need a refrigeration unit with "low temperature" rating at the same Btu per hr as the reefer trailer.

In other words, a unit that will take away the same heat as the trailer gains. In actual practice such problems as heat gain during loading, temperature of the cargo, temperature of the box at loading time, etc., will have to be taken into account.

Important also in getting the refrigeration you want will be the deviations from the standard rating conditions. Standard for trailers is the amount of heat gain with an outside temperature of 100 deg F based on maintaining zero inside the box.

ARI has set two standards for refrigeration units—a "High Temperature" and a "Low Temperature." High temperature standard is 100 deg F outside with temperature of the air returning to the cooler inside the trailer at 35 deg F. Low temperature standard calls for return air temperature to be zero with outside or "ambient" temperature of 100 deg F.

Under conditions of the standard

the manufacturer has one unit of each Model No. rated, can apply the rating without further test to all such units of the same design. The standard applies only to the complete unit.

ARI lists the following components as required. . . .

1. Forced-circulation air-cooler (evaporator) including coil assembly and connections, drain pan and drain connection, casing assembly, fan(s) and fan drive(s) and means for supporting the unit.

2. Refrigerant expansion device.

- Compressor including suction and discharge connections, oil charge, oil strainer, low pressure or low temperature control, service valves and suction gas strainer.
 - 4. Means for controlling temperature in trailer.
- 5. Power source including coupling to compressortransmission. V-belt drive, etc.
- Condenser including coil assembly, connections, casing assembly and fans (if required).
- 7. Liquid shut-off valve on receiver (if receiver is used).
- 8. Fusible element, soft-soldered joint or relief valve on "high side."

9. Base or frame plus nameplate.

For a copy of the new standard, write Air Conditioning and Refrigeration Institute, 1346 Connecticut Ave., N. W., Washington, D. C. Ask for "ARI Standard for Speed-Governed Transport Refrigeration Units Employing Forced-Circulation Air-Coolers, ARI Standard No. 1110-59," price is 75¢ a copy.

Here's the Container 1. The Trailer Chassis Equipment Hormel Uses to **Speed Delivery Reduce Handling** of Fresh Meat

Containers are loaded in route order. go over-the-road three on a trailer chassis, are fork lift switched one to a city truck chassis for final delivery

MEAT PACKER Geo. A. Hormel & Co., a containerized reefer shipping operation that . . .

• Eliminates meat handling between the packing house and the retail store.

· Speeds delivery.

· Cuts costs through equipment flexibility and

Equipment is described in detail at right. Here's how the operation works. . . .

Containers are loaded at Hormel's Austin, Minn., packing house on the night shift . . . in delivery route sequence. Each holds about five tons of meat, enough for 25 retail outlets on the average.

In the morning-mounted three to a trailer chassis—they hit the road for Minneapolis-St. Paul, Minn., where the trailer is met by three delivery trucks-each big enough for one container.

Fork-lifts transfer the loaded containers to the city jobs, load three empty containers onto the tractortrailer rig.

The interchange takes only about 20 min. until the city trucks are ready to make their deliveries and the tractor-trailer rig ready to start the return trip to the packing house.

Overall length of the trailer chassis, made by Brown Trailer, is 41 ft. 3 in. With containers, it is 12 ft. 1/4 in. at its highest point. Chassis weighs 7800 lb. Made of aluminum and steel, chassis skeleton has inner rails, no floor. Two 3/16 x 48 x 72-in. steel treadplates mounted on the chassis with gussets are used

2. The Locking System

As shown at right. Harmel's containers have one lock on each side to hold them on trailer chassis. Clark calls chassis section of the lock its "Mobilplant." Container section goes by the name

3. The Refrigeration

Refrigeration is supplied by a rear-loading, 200-lb capacity Foster-Built dry ice bunker in each container. Fan is located at the rear, blows cold air forward. Power is supplied from the trailer's 12-volt DC system or, for stand-by use, from any 110-volt AC current source through a transformer. Insulation includes 5 in. of Ultralite in the ceiling, 4 in. of Styrofoam in the floor. Walls have 4 in. of Styrofoam for the first 15 in. from the floor, 4 in. of Ultralite from there to the ceiling. Inside liner is 5/16 in. plywood with an epoxy vinyl varnish finish in refrigerator white.

4. The Container

Clark-Brown mobile reefer containers weigh 3200 lb, fit three to a trailer chassis, measure . .

- · Outside-111/2 ft long by 8 ft wide by 7 ft, 85/2 in. high.
- Inside—10 ft, 41/8 in. long by 7 ft, 2 2/3 in. wide by 6 ft. 41/2 in. high.

Double door opening measures 51 in, wide by 75% in, high. Doors have stainless steel hinges, recessed cam locks. Eight of Hormel's containers have doors at each end for walk-through convenience. On these, front doors have no exterior hardware.

5. The Electrical Connection

Each container has a contact plate—"A" at right. Each chassis has three contact fingers—"B"—one for each container. The system as platforms between the containers. Tandem axle is Clark's model No. 130451, with 11.00-22.5 tubeless tires mounted on Budd Model No. 71750 10-stud wheels. Suspension is sliding, adjustable from 70 to 136 in. from rear in 6-in. increments. PKAI king pin is modified for 4-ft location with landing gear located at 112 in.

of "Mobilock." Containers are fork-lift handled. When forks are all the way in pockets shown, lift truck also pushes against the two square buttons on each side of "Mobilock." This releases the lock. When fork truck backs away after loading box, spring-action of lock grips "Mobilplank" securely.

Fastened to wall—with same finish—are battens to allow for air circulation. Floor is extruded aluminum with drain trough running across the rear end. Floor level is 1½ in. above door level so water runs off into trough and out rear doors when containers are washed. Drip pan under bunker catches moisture condensation, runs it off through rubber hose down the right rear corner and out via a hole in the drain trough. There's a single stainless steel meat rail in each box on the opposite side from the dry ice bunker. Each container also has a single dome light. Thermometer mounted six inches above floor on the curbside of the reefer exterior gives direct reading of inside temperature.

open and close from inside only. Containers are finished in natural aluminum with Hormel decal in a sprayed-on green and white band running across the front and extending part of the way back on each side. Standard Model No. S corner castings have steel caps finished with two coats of xinc chromate primer plus aluminum paint final coat. Eight of the boxes have a slide-out aluminum treadplate to bridge the 34-in. gap between containers when they're mounted on the chassis. They also have a corrugated roof section that hangs just back of the front doors. These can be clipped between containers to protect the treadplate in walk-through loading.

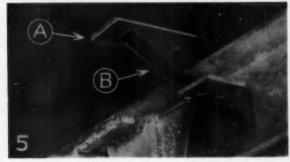
eliminates need for plug-in connections. Electrical system also includes a pressure cut-off switch mounted on each container to turn circulating fan off when door is opened.













Engine is Mercedes-Benz Model No. OM636, 4-cyl, 36-hp diesel. It mounts under trailer floor with condenser



Evaporator section goes in trailer mose. Ribbed walls and canvas ducting for return air promote circulation

Thermo King Designs Diesel-Powered Reefer for the Long Haul

Built for up to 45-ft trailers, it's a two-piece model. Condenser section with Mercedes engine mounts under floor

THERMO-KING IS producing a diesel-powered reefer for long haul trailer service. Pacific Intermountain Express is putting 100 of them in service.

New Model No. UWD-30, Thermo-King "Imperial" is a two-piece, combination cooling/heating unit.

It's largest in the maker's line, is designed for trailers as large as 45 ft in length. Special thermostat is adjustable from minus 20 to plus 70 deg F.

Condensing section measures 59 in.

long by 28 in. high by 35 in. wide, mounts under the trailer. It tips the scale at 1250 lb (of which 400 lb is engine weight) including refrigerant, water and battery. Evaporator section mounts high inside the trailer nose, weighs 315 lb. It measures $39\frac{1}{2}$ in. high by $58\frac{1}{2}$ in. wide by $20\frac{1}{2}$ in. deep. Refrigerant and control lines connect the two.

Diesel engine is a Model No. OM636 Mercedes-Benz. This is a 4-cyl, 4-cycle, liquid cooled model of 107.8-cu in. displacement rated at 36 bhp. Features include Daimler-Benz pre-combustion chamber, Bosch injection pumps and nozzles, Fram filters, glow-plug starting, aluminum pistons, chrome-nickel alloy cast iron block. Engine uses No. 2 diesel fuel with average consumption around 0.6 gal. per hr.

Engine operates continuously after

initial start. Thermostat automatically controls temperature. Unit operates at "high speed cool" until setting is reached, then automatically cuts back to "low speed cool" until more cold is called for. For heating, unit operates at "high speed heat" or "low speed heat" as controlled by the thermostat.

In addition to powering the condensing section, the engine drives an alternator to supply current for two AC motor-driven evaporator fans. These supply air circulation, operate continuously except during the defrosting cycle.

Compressor, made by Thermo-King, is a 4-cyl, V-type reciprocating unit. It has aluminum body and heads, gas-cooled crankshaft seal, forged-steel crankshaft and rods, integral suction pressure regulating valve. It's direct-connected to the engine.

(TURN TO PAGE 244, PLEASE)



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SHELL ROTELLA TOIL



For Passenger Car Fleet Operators, a Special Report—

What's New about the 1960 Model Cars?

Details on important under-the-sheet-metal changes

THE 1960 MODEL YEAR IS going to be known as the year of the small car . . . the unitized body . . . and the economy engine.

• Included among the 25 cars described in this section (and indexed at right) are the Big Three's entries in the small car race—Corvair (GM), Falcon (Ford) and Valiant (Chrysler). Also you'll find the first of the "compact" cars, the Dodge Dart.

● Unitized bodies—integrated body and frame—aren't new. There's an argument going-on as to who was first. For 1960, you'll find them on the three new small cars, all the other Chrysler cars except Imperial, all American Motors cars plus Ford's Thunderbird, Lincoln and yet-to-come Comet (see below).

◆ You'll find many standard engines are now more "economic" . . . lower hp and torque ratings, fewer 4-barrel or three by 2-barrel carburetor combinations, reduced compression ratios. Those that haven't changed are usually the middle rated of a three-choice package . . . economy, standard, power-pack. Newest of the power boosters is Chrysler's ram induction.

One thing for sure about the new small cars: They're not just unsanforized versions of what used to be the "low priced three" . . . and then left out in the rain. They're distinctly a different car—even more so than other models in the same maker's line.

And how about them as fleet cars? You'll know after you read the descriptions, but here are three items that say "Yes" . . .

• 100 Lark taxicabs in service in New York City.

• 1500 each—Corvair, Falcon and Valiant for Hertz's leasing operation (Aug., page 35). Corvair order is now reported at 3000.

• Says Philadelphia Police Commissioner Thomas J. Gibbons after inspecting a small car fitted for police work, "The car I saw will serve the department 100 per cent as well as standard cars now in use."

Major sales pitch on the new small cars is: "Take another one, it's small." Some four years ago, 4.8 million families owned two cars. This year, there are over 7.3 million two and three-car families. And that's only 13 per cent of all car-owning families.

Most optimistic estimates agree on about 1.8 million sales for small cars—domestic and imported. More conservative guessers say this figure could be too high by 300.000 cars.

There are still a few more 1960 models to come . . .

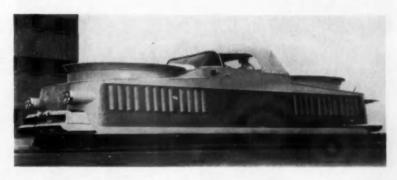
- In time for the "spring selling season" will be Ford's Comet, a "compact" car to be sold by Mercury dealers.
- Chrysler's 300F can be looked for in "three or four" months. In the meantime, you'll find a few details in this report under Chrysler.

As gathered by COMMERCIAL CAR JOURNAL'S Detroit Technical Editor Joe Geschelin, here are the details of the major mechanical changes in the 1960 cars.

Car Name	Page	No.
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- A 2-door hardtop Corvair is expected in January. A station wagon is on the "maybe later" list.
- Oldsmobile, Buick and Pontiac are reported as having "compacts" in the works. Their release might depend on whether or not the car market needs a booster shot to reach the predicted 6½ to 7 million car sales in 1960.

is it a car? Maker calls it the "Model No. 2500 Curtiss-Wright Air-Car". Is it a 1960 model? Manufacture starts next month at C-W's South Bend (Ind.) Division. The 4-passenger, 300-hp, air-suspended and air-propelled "vehicle" is designed to traverse six to 12 in. above any unobstructed surface—including water. Curtiss-Wright says it's available te "qualified" buyers



GENERAL MOTORS

Corvair

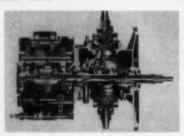
CORVAIR, General Motors' entry in the small car field, is probably the most different of the 1960 cars. here's why...

 Front and rear suspensions fasten directly to the body unit. There's no chassis in the usual sense.

• It has a rear-mounted, horizontally-opposed, 6-cyl, air-cooled engine, almost entirely aluminum.



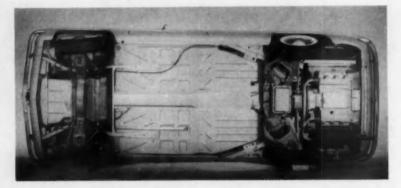
 Transmission and differential are combined into what is called a "transaxle" unit.



It's available in

standard and deluxe versions as a 4door, 6-passenger sedan. After the first of the year, a 2-door sedan is expected.

Both versions have 108-in, wheel-base, measure 180 in, long by 66.9 in.



wide overall. Tread width, front and rear, is 54 in.

The 140-cu in.

displacement, valve-in-head engine is rated 80 hp @ 4400 rpm with 125 lb ft of torque @ 2400 rpm. Compression ratio is 8 to 1.

It has a single crankshaft and a single camshaft. Almost all other components come in pairs . . . including one single-barrel carburetor for each bank of three cylinders.

Aluminum alloy crankcase is cast in two pieces. Bearing caps are eliminated. Bearing halves are inserted in each half of the crankcase, crush together when the crankcase is bolted together.

Crankcase cover is also cast aluminum, while the relatively shallow oil pan is stamped steel. Rear housing of aluminum alloy includes built-in oil pump.

Individual cast iron

cylinders are used. Each bank of three has a single cast aluminum head containing the combustion chambers. Cylinders and heads have cast-in fins for cooling.

Heads and cylinders fasten to crankcase with 24 long studs—four to each cylinder.

Pistons of

flat-head design are aluminum alloy with light tin plate coating plus steel struts for heat expansion control. Two compression rings and a single onepiece oil control ring are used.

Forged steel crankshaft has six throws arranged in pairs—one on each side. Pairs are spaced at 60 deg intervals around the shaft. Arrangement is designed to give inherent balance without use of counterweights.

Camshaft is

directly below the crankshaft, has a full set of six lobes for intake valves but only three for exhaust valves. These are extra large, handle two exhaust valves each—one in each cylinder bank.

Push rods are housed in steel tubes since there's no block. These also serve for lubricant return from head to oil pan.

For cooling

control, engine has a large metal cover with thermostatically-controlled air intake. Blower mounted on crankcase directs air outward and downward against the cylinders. Blower is belt-driven from rear of the crank-

Belt runs over two intermediate pulleys to change its movement from vertical to horizontal. One of these serves as the generator-drive pulley. The other is an idler, provides for belt tension adjustment.

There's an exhaust duct leading to a rear vent under each cylinder bank. On the left duct, there's an oil cooler through which some of the air passes

CORVAIR

on the way. By-pass valve for this is thermostatically-controlled.

Also to boost temperature control, the automatic choke is mounted on the air intake ahead of the air cleaner . . . and not, as you might expect, on the carburetors.

Engine mounts

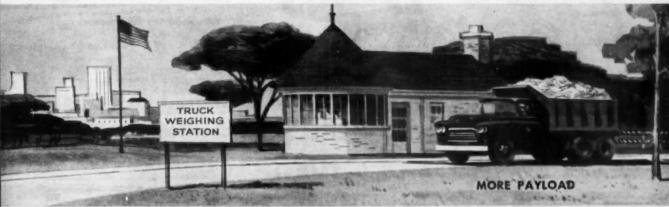
with flywheel end to the front, "backward" by conventional standards.

(TURN TO PAGE 122, PLEASE)



REASONS WHY VACUUM POWER BRAKING IS FIRST CHOICE ON TRUCKS







WITH BENDIX HYDROVAC* LEADING ALL OTHER MAKES COMBINED

When it comes to power braking, the overwhelming choice on trucks is vacuum power, with Hydrovac leading all other makes combined.

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Any way you look at it, it will pay you to make Hydrovac Vacuum Power Brakes your choice for the best in power braking . . . for the most in value.

Bendix PRODUCTS South Bend, IND.



Corvair

Continued from Page 120

Viewed from the front, engine rotates clockwise. Right rear cylinder is No. 1, left rear No. 2, and so on. Firing order is 1-4-5-2-3-6.

Corvair's transmission

is a three-speed manual shift with automatic available as an option. It mounts ahead of the differential.

Drive shaft from transmission to differential is hollow. Through it runs the power transmission shaft from the engine to the transmission.

Automatic transmission is an aircooled, three-element torque converter with two-speed planetary gear set. Power flow is similar to Chevrolet's Powerglide, except it has an eightactive face plate clutch for reverse.

Axle shafts are driven through Ujoints on each side of the differential

Independent

wheel suspension is used both front

and rear. In the rear, box section control arms support the wheel assembly . . . reacting against the suspension's coil springs. Weight distribution is about 40 per cent on the front, 60 per cent on the rear.

Wheels are 13-in, with 5.5 rims. Tires are 6.50-13 tubeless. Recommended inflation is 15 psi for front tires, 26 psi for rear. This differential plus the geometry of both the front and rear wheels gives optimum steering ease and control.

Hydraulic brakes

are of duo-servo type, nine inches in diameter with 1.75-in. wide lining. Braking effort is split 46 per cent on the front, 54 per cent on the rear. This is accomplished by using %-in. diameter wheel cylinders in front, 15/16-in, at the rear.

Because of the rear-mounted position of the engine, the optional car heater is a gasoline-fueled unit.

GENERAL MOTORS

Chevrolet

HEVROLET for 1960 comes in J Biscavne, Bel Air and Impala series-all on an 119-in. wheelbase. Biscavne comes in 2 and 4-door sedan models plus a 3-passenger "utility" sedan. Bel Air comes in 2 and 4-door sedans, 2 and 4-door hardtops. Impala models include a 4-door sedan, 2 and 4-door hardtops and a converti-

Six and 9-passenger 4-door and 2door station wagons are also available . . including such familiar names as Brookwood, Parkwood, Kingswood and Nomad.

Nine "engines"

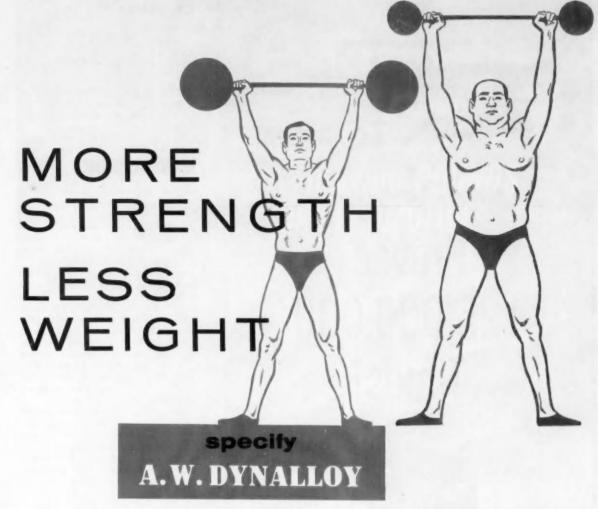
are offered. The 235.5-cu in. displacement, 6-cyl powerplant is rated 135 hp @ 4000 rpm, 217 lb ft of torque @ 2200 rpm. The "economy" carburetor version of the same engine is rated 110 hp @ 3200 rpm, 210 lb ft of torque @ 1600 rpm. Compression ratio for both is 8.25 to 1.

With a 2-barrel carburetor, the 283-cu in. V-8 is rated 170 hp @ 4200 rpm, 275 lb ft of torque @ 2200 rpm. It has 8.5 to 1 compression ratio. With 4-barrel carburetor, rating goes to 230 hp @ 4800, 300 lb ft of torque @ 3000 rpm with 9.5 to 1 compres-

Transmissions offered with these engines include 3-speed manual, over-

drive and Powerglide automatic. Tur-(TURN TO PAGE 124, PLEASE)





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Bendix-Elmira

Eclipse Machine Division Elmira, New York



Chevrolet

Continued from Page 122

bo-glide automatic is offered on the V-8 only.

The other five

"engines" are all versions of the 348cu in. V-8. With 4-barrel carburetor, it's rated 250 hp @ 4400 rpm, 355 lb ft of torque @ 2800 rpm. With three

CHEVROLET

2-barrel carburetors, rating goes to 280 hp @ 4800 rpm, 355 lb ft of torque @ 3200 rpm.

Transmissions on these two versions include 3 and 4-speed manual, over-drive, Powerglide and Turboglide. Compression ratio for both is 9.5 to 1.

A special camshaft and 35-amp generator is used in three versions. With 4-barrel carburetor and heavy duty Powerglide, it's rated 305 hp @ 5600 rpm, 350 lb ft of torque @ 3600 rpm. Compression ratio is 11 to 1. Used with the 3 or 4-speed transmission, the 4-barrel carburetor version has 11.25 to 1 compression ratio. Rating is 320 hp @ 5600 rpm, 358 lb ft of torque @3600 rpm. When equipped with three 2-barrel carburetors, retaining the 11.25 to 1 compression ratio and using either of the two manual transmissions, this engine rates 335 hp @ 5800 rpm, 362 lb ft of torque @ 3600 rpm. (All horsepower and torque ratings are gross

Engine changes

include lower lift camshaft in the 283cu in. V-8. This gives better low and mid-speed engine performance. Change also permits use of carbon steel intake valves and elimination of harmonic balancer.

Cylinder head has been modified to include an oil trough to prevent oil from accumulating in valve spring seat pockets. Outer rocker cover rail is lowered, so new head is not interchangeable with last year's.

Clutch lever shaft has been made longer and pedal lever movement reduced.

The 11.25 to 1 compression ratio, special camshaft versions of the 348-cu in. V-8 have hardened-tip exhaust valves—similar to the truck version.

Brake changes

include new brake shoe return springs, increase in front wheel cylinder inside diameter of 1/16 in. to give better brake effort distribution between front and rear.



The bearings in today's engines are exposed to tremendous loads. It wasn't too long ago that a bearing with a load carrying capacity of 2000 pounds per square inch was adequate. But, greater horsepowers . . . higher compression ratios . . . higher rpm's have set new requisites.

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the Clevite 77 bearing for instance . . . it has a load carrying capacity of 7500 pounds per square inch. That fact means a substantial bonus in bearing performance and life on the job.

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*The Clevite 77 bearing referred to here has 7500 lbs. per square inch load carrying capacity and a surface area of approximately 22 square inches.

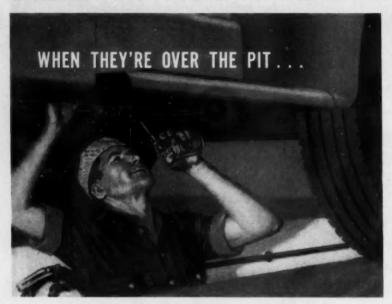
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GENERAL MOTORS

Pontiac

PONTIAC for 1960 includes 122-in.
wheelbase Catalina and Ventura
models, 124-in. wheelbase Star Chief
and Bonneville models.

Catalina and Ventura models include both 2 and 4-door hardtops. Catalina models also include 2 and 4-door sedans, a convertible and 6 and 9-passenger 4-door station wagons.

PONTIAC

Star Chief models include 2 and 4-door sedans, a 4-door hardtop. Bonneville models include 2 and 4-door hardtops, a convertible, and (on 122in. wheelbase) 6 and 9-passenger 4door station wagons.

Engine choices

are built around the 389-cu in. displacement, V-8. Manual shift version offered as standard on Catalina, Ventura and Star Chief models has 2-barrel carburetor, 8.6 to 1 compression ratio. It's rated 215 hp @ 3600 rpm, 390 lb ft of torque @ 2000 rpm. "Economy" option offered on all four series with HydraMatic transmission carries same ratings, carburetor and compression ratio.

With HydraMatic transmission on Catalina, Ventura and Star Chief models, same engine is available with larger 2-barrel carburetor and 10.25 to 1 compression ratio. Rating is 283 hp @ 4400 rpm, 413 lb ft of torque @ 2800 rpm.

Bonneville standard engine comes with manual shift. With 4-barrel carburetor and 8.6 to 1 compression ratio, it's rated 281 hp @ 4400 rpm, 407 lb ft of torque @ 2800 rpm.

The 10.25 to 1-compression ratio, 4-barrel carburetor version is rated 303 hp @ 4600 rpm, 425 lb ft of torque @ 2800 rpm. It's available on all series when HydraMatic-equipped.

Also available on all series with either manual or HydraMatic transmission is a 10.75 to 1-compression ratio version with three 2-barrel carburetors. Rating is 318 hp @ 4600 rpm, 430 lb ft of torque @ 3200 rpm.

Carburetors

have been modified to improve warmup operation.

Water pump has a divided chamber designed to distribute water equally to each cylinder bank.

Due to HydraMatic housing changes and a ½-in. lower engine mounting, tunnel through front passenger compartment is 1 in. lower, 2 in. narrower. Brake and clutch pedals are ¼ in. lower.



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Down on the farm, they've found it pays to use truck bodies that weigh less and haul more. This truck, owned by Fred and Ken Bruhweiler, Taylor, Missouri, was built 20% lighter, so it saves on fuel and tires. It hauls a legal load that is 500 pounds greater. What's more, the body can take a lot of punishment because it's built of USS Man-Ten High-Strength Steel.

Man-Ten Steel has about 50% higher yield point than steel ordinarily used for truck bodies. It is more resistant to impact abrasion and has about double the atmospheric corrosion resistance. Truck bodies built of Man-Ten Steel weigh less, last longer, and haul more. They quickly pay for themselves in more efficient operation.

For other types of truck bodies, United States Steel offers two other brands of high-strength steels, USS Cor-Ten for superior atmospheric corrosion resistance and USS Tri-Ten for extra toughness. Where super strength is needed with resistance to impact and abrasion, nothing surpasses USS "T-1" Constructional Alloy Steel with a minimum yield strength of 100,000 psi. All these special steels are workable and weldable. For more information, call our nearest sales office or write United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

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Available for 6 or 12 volts (automotive) and any voltage on special order. New Autopulse "1000" with universal mounting bracket fits any car or truck, any commercial, industrial, and marine engine.

A

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Division

WALBRO CORPORATION
Cass City, Michigan

GENERAL MOTORS

Buick

BUICK for 1960 includes the Le Sabre and Invicta series on the 123-in. wheelbase, and the Electra and Electra 225 series on the 126.3-in. wheelbase.

All series include 4-door sedan and hardtop models. Two-door hardtops

BUICK

appear in all but the Electra 225 series. Convertibles are included in all but the Electra series. Six and 9-passenger station wagons 4-door are available in LeSabre and Invicta models. There is also a LeSabre 2-door sedan.

LeSabre models

come with 364-cu in. V-8 engine and manual transmission as standard. Twin Turbine automatic is an extracost option. With it, three versions of this engine are available on the LeSabre. First has 10.25 to 1 compression ratio, 2-barrel carburetor. Rating is 250 hp @ 4400 rpm, 384 lb ft of torque @ 2400 rpm.

"Economy" version has same 2-barrel carburetor, 9 to 1 compression ratio. It rating is 235 hp @ 4400 rpm, 375 lb ft of torque @ 2400 rpm. With a 4-barrel carburetor and 10.25 to 1 compression ratio, it's rated 300 hp @ 4400 rpm, 405 lb ft of torque @ 2800.

Standard on

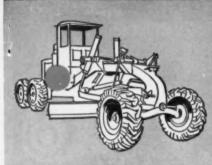
Invicta, Electra and Electra 225 models is the Twin-Turbine automatic transmission, the 401-cu in. displacement V-8 engine. Rating is 325 hp @ 4400 rpm, 445 lb ft of torque @ 2800 rpm. Compression ratio is 10.25 to 1.

Twin Turbine changes include a revised sun-gear overrunning clutch incorporating a sprag with an antipop out feature. Clutch plates have non-metallic facing. Stator blade high angle has been changed so engine speed at full throttle can be reduced. Needle-type thrust bearing replaces the plain stator-type used up to now. Triple Turbine automatic is discontinued.

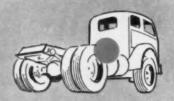
Air cleaner has a disposable element made of polyurethane foam. Two filters are used on the fuel line. First is woven plastic housed in the fuel tank. The other at the carburetor is a glass bowl with a fine paper element.

Muffler is

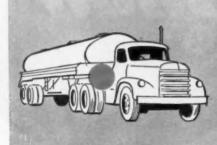
placed transversely at the rear. On dual exhaust systems, it's a larger model, has inlet and exhaust at each end.



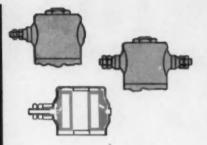
Automatic diesel governor contrel. To improve brake life and save fuel this motor grader uses a Skinner V5, three-way, normally epen solenoid valve to relieve pressure in the hydraulic actuated engine governor. When the brakes are applied, the valve is energized by a pressure switch on the master cylinder causing the valve to close and bypass oil from the governor cylinder which reduces the pressure and throtties the engine.



Saddle tank operation. Energized by a standard dash-mounted toggle switch, a Skinner valve makes fuel level readings and tank switching a one-step, push-button operation. Velve reduces accident hazard by preventing driver's attention from being diverted; saves on labor and materials by eliminating fuel piping.



Propane and butane fuel cut-off. On trucks using liquid propane or butane fuel, Skinner V61 solenoid valves are used as a safety device to automatically shut off the tanks from the fuel system when the vehicle is not in operation. The valve is installed on the line ahead of the vaporizing unit and is energized by the ignition switch. Skinner valves for this application are approved by the Underwriters' Laboratories.



Skinner solenoid valves are available with single or double automotive terminals; specially designed automotive housings with potted coils (coil, housing leads and flux plate are potted with a compound to make them vibration-proof and moisture resistant); and waterproof molded coils that operate in all types of weather, under the severest conditions—even under water.



Additional features of Skinner automotive valves include: stainless steel internal parts; soft synthetic, long-lasting inserts that provide bubbletight sealing; spring-loaded plungers; mounting in any position; orifice seats with radius with well-rounded contact area and high finish for long insert life. All valves are built to the highest UL standards for the convenience and safety of the automotive industry.

Skinner solenoid valves help solve automotive problems like these

SKINNER SOLENOID VALVES ARE DISTRIBUTED NATIONALLY. For complete information, contact a Skinner Representative listed in the Yellow Pages or write us at Dept. 540



Head for L.A. and the A.T.A.
YOU'LL
SEE
THE WEST
IS



T'S A FACT that every large western fleet rolls on Budd Wheels. If you'll stop in at the Budd Suite in The Biltmore during the A.T.A. meetings, we'll tell you why. It won't

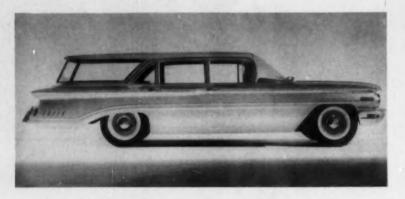


take long. And your visit will be worthwhile . . . in more ways than one! If you can't make L.A., be sure to get our western "success story" from your Budd Wheel Distributor.

Budda



BUDD AUTOMOTIVE DIVISION DETROIT 15, MICHIGAN





Tighten an AERO-SEAL Hose Clamp in place and no amount of sibration will snap its jaws open. You just can't shake it loose! An exclusive patented feature permits quick installation with just a few turns of the precision worm drive screw. Anti-corrosise bands and housings are of 302-18-8 stainless steel. 100% stainless also available. Best of all, AERO-SEAL JETS tighten evenly all around—won't pinch or damage hose. No extra price for quick-attach JETS. Famous regular AERO-SEALS available if preferred. Get genuine AERO-SEALS and satisfy customers. Make full profit, too.



BREEZE CORPORATIONS, INC., 700 LIBERTY AVENUE, UNION, N. J.

GENERAL MOTORS

Oldsmobile

OLDSMOBILE for 1960 includes 17 models in the 88, Super 88 and 98 series. Body types are the same as last year plus addition of 9-passenger 4-door station wagons to the 88 and Super 88 lines.

Standard engine on the 88 series is the 371-cu in, displacement V-8. With

OLDSMOBILE

compression ratio of 8.75 to 1 and 2-barrel carburetor, its rating is 240 hp @ 4400 rpm, 375 lb ft of torque @ 2400 rpm. Same engine with compression ratio boosted to 9.75 to 1 is optional on the 88's. It's rated 260 hp @ 4400 rpm, 390 lb ft of torque @ 2400 rpm.

Standard on the Super 88 and 98 series is the 394-cu in. displacement V-8. With 9.75 to 1 compression ratio and 4-barrel carburetor, rating is 315 hp @ 4600 rpm, 435 lb ft of torque @ 2800 rpm.

The 371-cu in.

engine gets its increase in combustion chamber volume from a new dished piston head, thus permitting use of interchangeable cylinder heads. It also has a new camshaft.

Weight of the 1960 Super 88 permits use of 8.50 x 14 tires.

GENERAL MOTORS

Corvette

CORVETTE shows little outside change for 1960. It's offered with five different versions of the 283-cu in. displacement V-8 engine.

It comes with 3 or 4-speed manual transmission on all varieties. Powerglide automatic is offered only on first two engine choices. Here they are . . .

With 4-barrel

carburetor and 9.5 to 1 compression ratio, gross hp is 230 @ 4800 rpm, net hp is 195 @ 4600 rpm. With same compression ratio but two 4-barrel carburetors, gross hp goes to 245 @ 5000 rpm, net to 214 hp @ 4800 rpm. Adding a special camshaft to this last engine gives gross hp of 270 @ 6000 rpm, 230 net hp @ 6000 rpm.

Fuel injection plus 11 to 1 compression ratio gives engine a gross rating of 275 hp @ 5200 rpm. Adding the special camshaft to this version boosts the gross hp to 315 @ 6200 rpm.

ozoo rpiii.



A Yellow Cab stand in downtown Oklahoma City . . . drivers and passengers appreciate the lack of fumes and smoother power of Philippas fuel.



The men who engineered the change to Philgas for Yellow Cab—(*left to right*), Tom Fuller, Guy Fuller, Sr., and Guy Fuller, Jr.



Guy Fuller, Jr. points to the compact Philgas tank in a new cab. Fuel is butane and propane—60 and 40% for winter, 80 and 20% for summer.

*Philgas is the Phillips Petroleum Company trademark for its high quality LP-gas (propane-butane).



Philgas' cuts maintenance and fuel costs for Yellow Cabs in Oklahoma City!

The Yellow Cab Company of Oklahoma City operates 86 taxicabshalf of them on Philgas. In a short while, as old cabs are replaced, they will all be on Philgas. The owner, Guy Fuller, Sr., has this to say: "Powering cabs with Philgas is one of the more significant developments to come along in the 30 years that I have been in this business. We started with Philgas in the middle of 1958. Although the complete story cannot be evaluated for another year or so, early tabulations show some startling operating economies because of Philgas."

Here are some of the results of Yellow Cab's brief experience with Philgas: A 25% reduction in fuel costs... extension of engine overhaul period from 35-40,000 miles to 85-100,000 miles . . . an 80% reduction in the amount of motor oil used . . . five times the life on oil filters . . . 18-20,000 miles on a set of spark plugs instead of 6-7,000 miles . . . an apparent increase in muffler life . . . no carburetor maintenance.

Mr. Fuller adds: "It costs us about \$300 more for a new cab equipped to run on Philgas. However, the resulting economies soon pay for this extra cost. We are also fairly certain that, as time goes by, we shall find other savings from using Philgas fuel."

Mr. Fuller's experience is typical of other taxi fleet owners using Philgas. For further information on how you can benefit from using Philgas... write or phone the nearest Phillips Sales Office listed below.

PHILLIPS PETROLEUM COMPANY

SALES DEPARTMENT, Bartlesville, Oklahoma

SALES OFFICES:

Amarillo, Tex., First Nat'l Bank Bldg. • Atlanta, Ga., 1428 West Peachtree St., Station "C" P.O. Box 7313 • Chicago, III., 7 South Dearborn St. • Denver, Colo., 1375 Kearney St. • Des Moines, Iowa, 6th floor, Mubbell Bldg. • Houston, Tex., 6910 Fannin St. • Indianapolis, Ind., 3839 Meadows Drive • Kansas City, Mo., 201 E. Armour Blvd. • Minneapolis, Minn., 215 South 11th St. • New York, N. Y., 80 Broadway • Omaha, Neb., 3212 Dodge Street • Raleigh, N. C., 401 Oberlin Road • Salt Lake City, Utah, 68 South Main • St. Louis, Mo., 4251 Lindell Blvd. • Tampa, Fla., 3737 Neptune St. • Tulsa, Okla., 1706 Utica Square • Wichita, Kan., 501 KFH Building

UNSCHEDULED STOPS COST MORE THAN NEW

CABLE

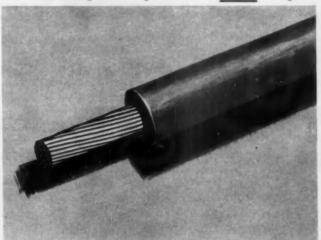
... replace with dependable PACKARD cable

Tired cable can cause expensive unscheduled stops—costly in customer goodwill as well as dollars. A simple low-cost rewiring job, done in time, can mean real savings. That's why experienced operators put cable inspection at the head of their PM check list, and insist on Packard cable for replacement use.

Why Packard cable? Because it's specifically engineered to meet the exacting demands of constant over-the-road use. For example, Packard cable is insulated against the oil and acids found around every engine. It retains its flexibility while resisting abrasion. And most types of Packard cable are firesafe—the insulation will not support combustion. No wonder Packard gives you more miles of dependable service at less cost per mile!

Packard is the *original equipment* line that is used more than all other makes combined. Packaged and labeled for easy, accurate replacement, it's available everywhere through the United Motors System.

Packard Super Duty Cable is really tough



Designed to take the extra punishment that comes with exposed wiring conditions. Packard Super Duty Cable delivers a longer service life. Its extra-heavy plastic insulation is unaffected by water, road splash, sunlight, oil and age, and will not support combustion. Stands up under abrasion and knocks to lessen your operating costs. Extra insulation eliminates need for loom, saving labor and material costs. Whatever your cable needs. you can get them from one source when you choose Packard. It's the original equipment line used more than all others combined.

There's a Packard cable for every fleet need.



ENGINE COMPARTMENT CABLE for low-tension use. High-heat insulation stands steam cleaning.



T.V.B.S. CABLE developed to eliminate radio-TV interference used on more cars than any other.



"440" IGNITION CABLE designed for high-tension service. Installed on millions of vehicles.



"Live Wire" division of General Motors

FORD MOTOR

Falcon

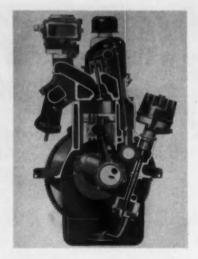
RALCON, Ford's entry in the small car group, comes in 4 and 2-door sedan models on an 109.5-in. wheelbase.

Engine is a 6-cyl, 144-cu in. displacement powerplant with 8.7 to 1 compression ratio. Rating is 90 hp @ 4200 rpm, 138 lb ft of torque @ 2000 rpm. It has a larger bore than stroke—3½ by 2½ in.

Falcon's emphasis is on light weight and simplicity, including a reduction in number of parts where possible. As an example of weight cutting, the new engine tips the scale at 345.5 lb. It is reported to have 120 fewer parts than a Ford 6-cyl engine. Body is said to have 200 fewer parts than standard Ford body.

Engine is of

cast iron construction with aluminum flywheel housing and transmission extension. Single-barrel carburetor is used. Air cleaner has dry-type, replaceable element. Engine head and manifold are cast as one piece.



Electrical system is 12-volt. It has a new plunger pole-type starter. Wiring system uses quick-disconnect terminals and connections.

Standard transmission is a 3-speed, manual unit, with 8½-in. diameter "pot" type clutch. Optional is a 2-speed Fordomatic automatic transmission with a 10¼-in. torque converter.

Drive shaft has 2½-in. OD with standard U-joint front and rear.



a malleable iron differential carrier into which the tubular extensions are pressed. Differential case is a one-piece casting. Drive gear mesh adjustment is by means of an adjusting collar on each side.

Drive pinion is mounted on two, wide-spaced tapered roller bearings. It has no outboard bearing. Gear offset is 1½ in. Axle alignment and adjustment are made without shimming.

Body is of new unitized construction eliminating the chassis frame. Included is a replaceable, bolted-on front fender.

Front suspension

is ball pivot type similar to other Ford-made cars. Main difference is in placement of the coil spring and shock absorber—mounted on top surface of upper control arm. Stabilizing strut on lower arm forms with the lower arm an "A-frame" to guide lower part of spindle.

Steering gear has overall ratio of 27 to 1. It's a recirculating ball gear

Brakes are

9 in. in diameter. Ford says there are some 30 less pieces to service



with steel joints.

than on present duo-servo brakes. Tires are low profile 6.00 size mounted on 13-in, wheels.

Rear suspension is Hotchkiss type. It has a 5-leaf spring with large isolating front eye bushing, "sea legs" mounted shock absorbers and axle insulator to minimize road noise.

Heating and ventilating system is a high-capacity cowl ventilation model plus heater/defroster.



Ford

PORD for 1960 includes eight "names" as follows. . . .

- Fairlane—2 and 4-door sedans, 2-door business coupe, all on an 119-in. wheelbase.
- Fairlane 500—2 and 4-door sedans on an 119-in. wheelbase.
- Galaxie—2 and 4-door sedans, 4-door hardtop, all on an 119-in. wheel-base.
- Starliner-2-door hardtop.
- Sunliner-convertible.

- Ranch Wagon—2 and 4-door, 6passenger station wagons.
- Country Sedan—6 and 9-passenger, 4-door station wagons.
- Country Squire—9-passenger, 4-door station wagon.

Engines offered include the 6-cyl, 223-cu in. displacement powerplant with 8.4 to 1 compression ratio. It's rated 145 hp @ 4000 rpm, 206 lb ft of torque @ 2000 rpm.

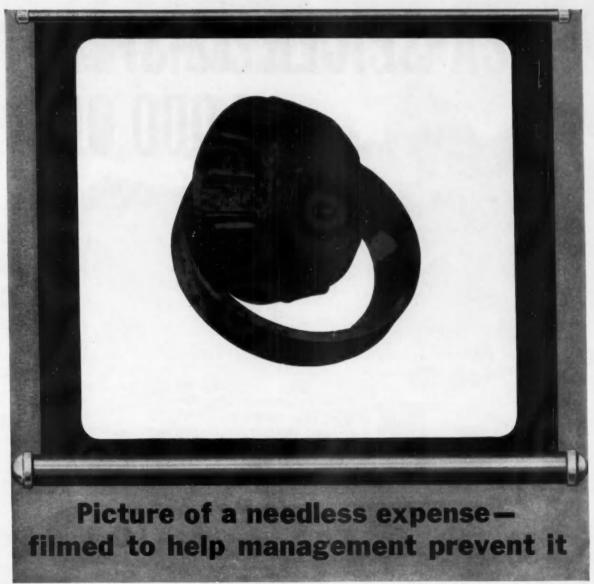
V-8's include the 292-cu. in. engine with 8.8 to 1 compression ratio and 2-barrel carburetor. It's rated 185 hp @ 4200 rpm, 292 lb ft of torque @ 2200 rpm.

Two versions of the 352-cu in. V-8 are also available. With 2-barrel carburetor and 8.9 to 1 compression ratio, it's rated 235 hp @ 4400 rpm, 350 lb ft of torque @ 2400 rpm. With 4-barrel carburetor and 9.6 to 1 compression ratio, it goes to 300 hp @ 4400 rpm, 381 lb ft of torque @ 2800 rpm.

Three-speed manual

transmission is standard. Options include overdrive, Fordomatic (two-speed automatic) and Cruise-O-Matic (dual range automatic). This last is

(TURN TO PAGE 140, PLEASE)



The film clip is taken from a Texaco movie about grease, called "Shear Magic." It shows a grease-lubricated roller bearing that has literally been eaten up by rust because improper lubricant was used.

To help you take steps to prevent this same occurrence "Shear Magic" presents the latest advances in greases and grease-testing methods.

You will see how *only* the right greases protect against heat, water, cold, dust, shock, and other conditions. You will find out about new greases, their components and capabilities.

You will learn how the right grease schedule—one planned exactly for your operation—can help you reduce maintenance and replacement costs and substantially improve your company's profit picture.

There is no "hard sell" in "Shear Magic," only informative talk. Texaco will be glad to arrange for a showing of the 25-minute sound film right in your plant. To start the projector rolling, just mail the coupon.

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of "Shear Magic" to my	
organization.	
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Company	
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LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

SPICER 12-SPEED 4,000,000



TRANSMISSIONS PASS MILE TEST!

T. J. Carter, Vice President of Fleet, and Chas. S. Willis, Superintendent of Maintenance, examine the pilot model Spicer 12-Speed Transmission. This unit now has over 250,000 miles of perfect performance behind it. Interstate Motor Lines disassembled the pilot model at 71,000 miles for inspection of bearings and synchronizing units. Only minor adjustments to air controls were needed.



Interstate Motor Lines, highway transportation pioneer headquartered in Salt Lake City, has logged well over 4,000,000 maintenance-free miles on 53 Spicer 12-Speed Transmissions, Model 8125.

IML is routed in the West—and blazes highway haulage trails over and through the Rockies, the Sierra Nevadas and the Wasatch Mountains. High-altitude wintry blasts and the fierce heat of salt-flat deserts have taken turns proving that Spicer 12-Speeds will operate trouble-free under the worst conditions.

T. J. Carter, IML Vice President of Fleet, says, "We specify Spicer 12-Speed Transmissions because of their light weight, short overall length, high torque capacity and low maintenance cost."

Write to Dana Corporation for complete information on Spicer 12-Speed Transmissions. Ask for the booklet that tells how to shorten your wheelbase by a foot, increase payload by 200 pounds, eliminate the auxiliary transmission and two-speed axle.





DANA

Toledo 1, Ohio

SERVING TRANSPORTATION — Transmissions • Auxiliaries • Universal Joints • Clutches • Propeller Shafts

Power Take-Offs • Torque Converters • Axles • Powr-Lok Differentials • Gear Boxes • Frames

Many of these products are manufactured in Canada by Hayes Steel Products Limited, Merritton, Ontario



Ford

Continued from Page 136

available only with the 352-cu in.

Body improvements include elimination of windshield dogleg at front doors. Brakes on Fairlane, Fairlane 500 and Galaxie are 11 in. in diameter. 21/4 in. wide, front and rear.

FORD

On station wagons, front brakes have same diameter but are 3 in. wide.

All engines feature wedge-shape high turbulence combustion chambers, free turning intake and highalloy cast steel exhaust valves, aluminum alloy pistons, chrome-plated top rings, full flow oil filter, 18-mm spark plugs, resistor-type spark plug leads.

Distributor breaker assembly on all engines rides on three nylon buttons requiring no lubrication. Standard battery has 66 plates instead of the usual 54.

The 6-cyl engine

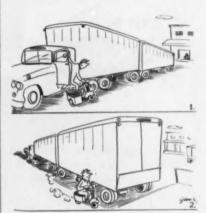
continues the rotor-type oil pump introduced as a running change this year. It has an adjustable stroke accelerator pump and manual choke.

New vacuum control system regulates ignition timing through the distributor without centrifugal advance. Also, fuel metering system has been recalibrated. When used with automatic transmission, an air-type dash pot is included to prevent stalling.

All V-8's have

a new automatic choke. It's an airvalve, thermostatically-controlled unit with solid choke plate.

Also on these engines is a new (TURN TO PAGE 142, PLEASE)



PROFESSIONAL RESPONSIBILITY
On the Highway

The modern truck driver is an expert, a "Pro." in his own right. He recognizes the importance of his good safety record. A Handy Governor helps him to maintain that record.

With his engine speed governed, he instinctively avoids those traffic situations from which only a hazardous burst of speed might extricate him. Governors help to build good Public Relations for the transport industry!



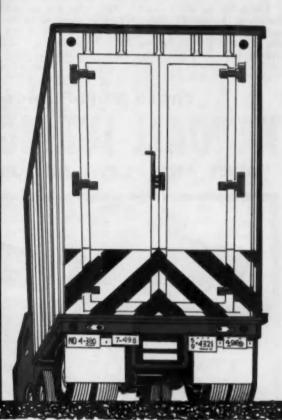
UP GRADE ...

(maximum heating)

. DOWN GRADE

(maximum cooling)





KYSOR HOLDS ENGINE TEMPERATURE UNIFORM!

Cruising down-grade after a long up-grade pull creates dangerous temperature stresses within an engine . . . dangerous enough to crack a block. The only practical way to hold engine temperature uniform and reduce these temperature stresses is to control the amount of air blast through the radiator and over the engine.

Kysor automatic radiator shutters will hold engine temperature within 5° (plus or minus) of the shutterstat setting, no matter what the grade, load or weather.

Kysor shutters will last the life of the truck—yet pay for themselves in less than a year. Include Kysor temperature control benefits for your trucks. GET THESE BENEFITS OF KYSOR UNIFORM TEMPERATURE:

- Near elimination of sludge.
- Great reduction of cracked blocks and heads.
- Increased fuel and lube oil mileage.
- · Much longer engine life.
- Less down time.
- · Increased performance.

SPECIFY ...



automatic radiator shutters

FIELD APPLICATIONS AVAILABLE . KYSOR HEATER CO., CADILLAC, MICH.

Ford

Continued from Page 140

crankshaft vibration dampener with pulley groove machined in the inertia member. Larger air filter with shallower body has new pleated cellulose element.

The 292-cu in. V-8 has spark plug electrodes positioned deeper in the combustion chamber. Intake valves are smaller for better combustion on regular fuel. Pressure control valve

on the oil pump has been modified to improve reliability.

The 4-barrel version of the 352-cu in. engine has a high lift cam-shaft for better low speed torque, modified intake manifold, dual exhaust.

Changes in the

4-barrel carburetor set-up include fuel metering changes and relocation of the hot air source from the intake manifold to the right-hand exhaust manifold to give better choke operation.

New radiator is cross-flow type

with separate reserve tank. Cooling system is pressurized, has an 180der F positive action thermostat.

Front fenders are narrower, are of removeable bolt-on design. Mufflers across-the-line are aluminized and located behind the rear wheels.

Ladder-type chassis frame is 11.8 in. longer than on 1959 models. On convertible frames, an I-beam X-member is added.

Front suspension

has lubricated-for-life upper support arms mounted in threaded bushings. There's also a link-type roll stabilizer, recirculating ball and nut steering gear. Power steering option is a linkage-type assist mechanism.

Rear suspension has springs mounted outboard with tension shackle at the rear. Springs of 4-leaf design are now 60 in. long, 2½ in. wide. Short front section gives variable rate characteristics.

Brakes are fixed-anchor type, have self-energizing primary and secondary shoes on each wheel. Drums are cast iron with fused-on pressed-steel section.

Hydraulic fluid reservoir is a cylindrical can with screw-on top located on the firewall for ease of inspection and filling.

Fordomatic

transmission has new shift pattern, revised pressure regulator valve, change in converter stall speed.

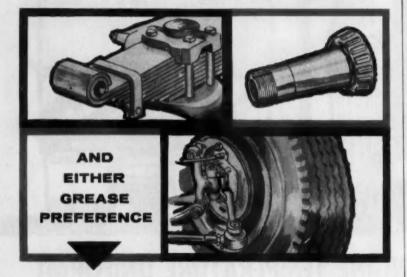
Cruise-O-Matic unit has its torque converter reduced to 12-in. diameter, torque multiplication increased to 2.1 to 1, converter stall speed boosted about 200 rpm.

"Equa-Lock" no-slip differential is offered as an option.

These Multi-Purpose

KENDALL LUBRICANTS

MEET ANY FLEET REQUIREMENT



KENLUBE L-421 (LITHIUM)—a unique new Lithium grease that combines high viscosity index oil with an unusual castor oil derivative, Lithium 12 Hydroxystearate. L-421 assures new protection against rusting, water contamination, low temperature thickening and high temperature runout in a wide variety of fleet applications. Timken Roller Bearing Co. Approved.

KENLUBE B-521 (BARIUM) — a Barium soap base grease. Won't run or throw out, absorbs water without losing adhesive properties. Provides positive, lasting lubrication in many fleet applications.

BOTH SAVE YOU MONEY IN LUBRICANT INVENTORY AND WEAR PREVENTION. ASK YOUR KENDALL DISTRIBUTOR.

KENDALL REFINING COMPANY Bradford, Penna.

Lubrication Specialists since 1881



Thunderbird

THUNDERBIRD for 1960 continues with 2-door hardtop and convertible models. New this year is a sliding roof panel option on the hardtop. Located over the front seats, it opens and closes manually, runs on tracks.

"Spoiler" bar on windshield leader deflects air stream so it will not enter car. It also creates a partial vacuum for ease in opening panel as well as promoting ventilation when it's open.

Convertible top is now fully automatic. When clamps are released and control handle pulled, rear deck opens automatically and top folds down into trunk. Deck lid then returns to closed position.

Beware of Costly Damage Claims

Avoid costly bumper and arille damage claims by using the Watco Iron Horse End Lift



Jack. It reaches beyond the bumper even on new cars . . . a full 121/2" to the center of the lift pad to grip the brackets where other jacks cannot reach. 3000 lb. capacity. Can be operated wherever an air hose can

SHOP HINTS

reach. Locks every 4". Raises car up to 31". Has two positive safety lock features.

Lightweight Sander has only One Moving Part

The air operated Watco Handy Sander weighing only 4 lbs. has no gears to wear and its aluminum alloy housing is practically unbreakable. Use it for heavy arinding or light sanding. Vibrationless and quiet, it requires only 60 lbs. air pressure. Ideal for use near drip mouldings, window areas, body joints and other tight or awkward places. Contains automatic air by-pass safety feature. Speed up to 10,000 r.p.m.

Safety Lift puts Body Work where You Want It



Because of its longer reach (66" the new Watco Service Master Safety Lift services more different makes of cars. It clears bumpers 81/2" from the floor. Air operated with double heavy duty tanks. 4-way automatic safety locking. Lifts 57" high.

For more information regarding these and other Watco products write for catalog to Watervliet Tool Co., Inc., Albany 4, N. Y.

Service Records Prove...

"WATCO Fleetmaster Cuts Service Time"

The new Watco Fleetmaster truck lift is the world's first heavy duty lift with up to 12,000 lbs, capacity. It handles trucks, busses, contractor's equipment with ease. Fully guaranteed, has no seals to break. Safety pop valve prevents overloading. Designed for one man operation.



NEUMATIC EQUIPMENT OR THE AUTOMOTIVE WORLD

LEO COUTURE, Service Manager, INTERNATIONAL HARVESTER CO., ALBANY, N. Y., Says . . . "They're right about what they say regarding the Watco Fleetmaster Truck Lift. We have one and have been using it regularly. It lifts anything on the axle or frame or by using an adapter. The Fleetmaster cuts service time, saves money. Our records prove it." Write for catalog on all WATCO air operated equipment.

WATERVLIET TOOL COMPANY, INC.

ALBANY 4, N. Y.

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Please arrange to come in and demonstrate the SSG in my shop. I understand there's no oblion my part.

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Let us prove to you, in your own shop, that the Kwik-Way Super Seat Grinder is faster and more accurate than any other equipment you can buy. Famous Kwik-Way tapered arbor asures precision. 53°

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angle drive adjusts to suit the job or the operator — makes any in-chassis job easier. Powerful motor delivers extra power and prolongs life of the SSG Seat Grinder. See the best in operation. Mail coupon today. No obligation.

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ENGINE RECONDITIONING EQUIPMENT	CEDAR RAPIDS, IOWA

FORD MOTOR

Edsel

DSEL for 1960 comes in two series. Ranger models include 2 and 4-door sedans, 2 and 4-door hardtops and a convertible. On an 120-in, wheel-base, they measure 216.4 in. long, 81.5 in. wide, 55 in. high. Villager line includes 6 and 9-pas-

EDSEL

senger, 4-door station wagons. Also on an 120-in. wheelbase, they measure 214.8 in. long. 81.5 in. wide. 56.5 in. high

Standard engine is the 292-cu in. displacement V-8 with 2-barrel carburetor and 8.8 to 1 compression ratio. It's rated 185 hp @ 4200 rpm, 292 lb ft of torque @ 2200 rpm.

Options include the 223-cu in. 6-cvl engine with 8.4 to 1 compression ratio. Rating is 145 hp @ 4000 rpm, 206 lb ft of torque @ 2000 rpm. The 352-cu in. V-8 is also offered with 4-barrel carburetor, 9.6 to 1 compression ratio. It's rated 300 hp @ 4600 rpm, 381 lb ft of torque @ 2800

Transmissions

offered on the 292-cu in. V-8 and the 223-cu in. 6-cyl include 3-speed manual or two-speed Mile-O-Matic automatic. On the 352-cu in. V-8, choice is Mile-O-Matic or dual range Cruise-

All engines come with redesigned vacuum control mechanism, breaker plate nested on three nylon buttons requiring no lubrication, new distributor condenser, resistance cable replacing the resistor unit in the distributor point circuit.

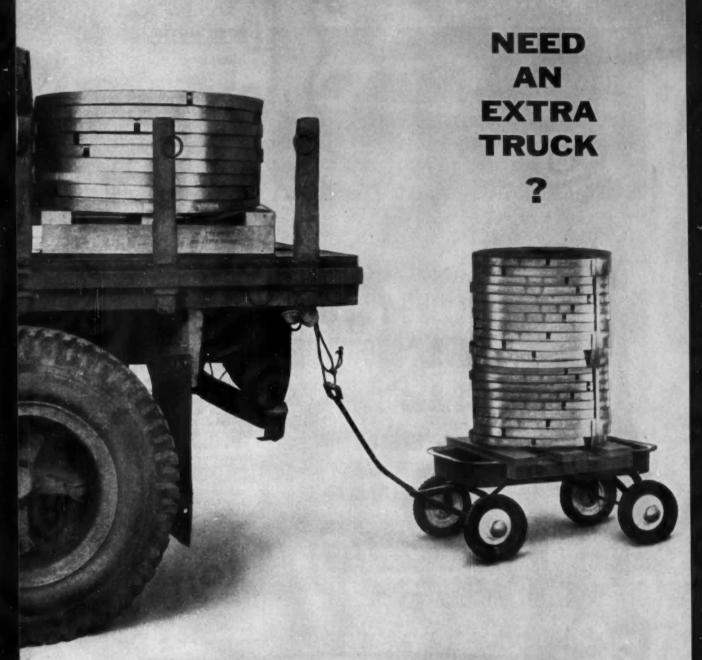
The 292-cu in. V-8 features wedgeshape combustion chambers, with spark plug electrodes positioned deeper in the chamber. Also, intake valve diameter is decreased to permit more economic fuel use.

Six-cyl engine's intake manifold has been modified. On the 352-cu in. V-8, a high lift camshaft is used to improve low speed torque.

Both 2 and 4-barrel

carburetors pick-up hot air from right-hand exhaust manifold for better choke operation, have revised vents on the cover plate. They've been recalibrated for improved fuel economy.

On V-8 engines, carburetors have a new automatic choke using a torsion-type spring-loaded choke plate.



RENT IT FROM HERTZ

Overloading trucks never pays. Neither does tying up capital in owned trucks that may sit idle, waiting for peak delivery periods.

Renting Hertz trucks solves both problems. You get the added capacity you need for extra jobs, without investing a dime of capital.

Hertz is America's largest and most experienced truck rental company. We offer a greater variety of Chevrolet, GMC and other modern trucks in more locations, available on short notice, than any other company. Even tractors and trailers are available in many cities. Call your local Hertz office whenever you need added truck capacity in its most economical form.



Lease Hertz trucks for economical year-round operation







FORD MOTOR

Mercury

ERCURY for 1960 includes 2 MERCURY for 1900 includes and 4-door hardtops in all three series Monterey, Montclair and Parklane.

Monterev also includes 2 and 4-door sedans and a convertible. Montclair also includes a 4-door sedan. Parklane also comes as a convertible.

MERCHRY

Commuter and Colony Park station wagons come in 4-door, 6-passenger models. Retractable third seat is available on both as a regular production option to boost capacity to nine passengers.

All models are

on an 126-in, wheel-base, measure 219.2 in. long by 81.5 in. wide by 55 (Monterey), 56 (Montclair and Parklane), 57.8 (station wagons) in. high.

Monterey and Commuter standard engine is the 312-cu in, displacement V-8 with 8.9 to 1 compression ratio. It's rated 205 hp @ 4000 rpm, 328 lb ft of torque @ 2100 rpm. It comes with standard 3-speed manualshift transmission or single-range Merc-O-Matic automatic transmission optional.

Optional for these two series is the 383-cu in. V-8 with 8.5 to 1 compression ratio. It's rated 280 hp @ 4200, 405 lb ft of torque @ 2200 rpm. It comes with either single or dualrange Merc-O-Matic.

Third engine is a 430-cu in. V-8 with 10 to 1 compression ratio. It's rated 310 hp @ 4100 rpm, 460 lb ft of torque @ 2200 rpm. It's standard on Parklane models with dual-range Merc-O-Matic only. With choice between single or dual-range Merc-O-Matic, it's also standard on Colony Park models

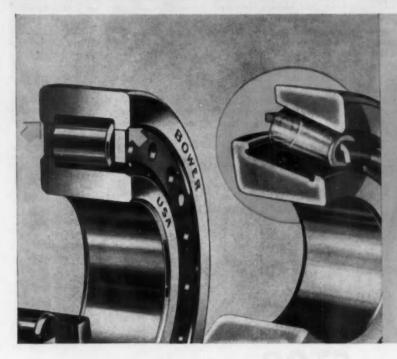
All engines have

2-barrel carburetor. Mercury says they give better performance at low speeds, about the same as a 4-barrel unit in the 60 to 70 mph range with better fuel economy.

Other across-the-line engine changes include 12,000-mile disposable fuel filter. It's sealed in an aluminum housing located on the fuel line between fuel pump and carburetor. It has a porous, paper element.

New distributor has three nylon supports for the distributor plate. Plate slides on these new no-lube (TURN TO PAGE 148, PLEASE)

Better products, faster, from your Bower bearing jobber:





COUNT ON BOWER for easy installation, extra-long service life in heavy-duty fleet operation.

Exclusive features make Bower roller bearings your best buy for heavy-duty fleet service!



Spher-O-Honed tapered and "Two-Lip" straight roller bearings run with less friction and wear; carry heavier loads longer!

Fleet service is rugged duty for trucks, tractors and trailers, yet equipment must keep rolling to return a profit on its cost! It's a job for each component to share, and Bower does its part by building these long-life features into every roller bearing:

Circle highlights the exclusive Spher-O-Honed design of Bower tapered roller bearings. Contour-ground rollers, larger oil groove and super-finished raceways team up to reduce friction and wear, stretch service life. Arrows point out the special "Two-Lip" construction of Bower straight roller bearings. Their greater rigidity and improved roller alignment let them carry heavier loads longer—and with less maintenance.

Tapered or straight, Bower roller bearings can help keep your equipment running smoothly . . . and profitably. Your Bower bearing jobber gives fast delivery from stock. Call him today!

BOWER ROLLER BEARINGS

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. . DETROIT 13, MICHIGAN



Mercury

Continued from Page 146

nylon bearings, moving easier and giving more responsive spark advance, says Mercury. Also new in the distributor, the primary wire runs right through the distributor housing, through a grommet to the coil.

Rocker cover gaskets are stapled to rocker cover . . . reduces chances of their working out of position. The 312-cu in.

V-8 has re-shaped combustion chamber for better fuel charge velocity. Spark plugs are seated deeper in combustion chamber for better ignition. Carburetor float level can be adjusted externally without even removing float bowl.

Improvements to the 383 and 430-cu in. V-8 engines include combustion chambers in the cylinder block instead of the head. They're machined on all sides. Heads are flatmachined.

Intake manifold is water-jacketed.

Automatic transmission valving has been modified for smoother shifts. Front relief valve on front clutch control is improved to avoid overloading when engine is running with car standing still. There's a new ribbed torque converter housing on the Merc-O-Matic when used on the 430-cu in. engine to give greater rigidity.

Front suspension lower ball joints have teflon thrust bearing between the ball stud shoulder and ball bearing surface. Variable rate type, 6-leaf rear springs are 60 in. long, 2½ in. wide. Leaves are separated by wax-impregnated woven cotton liners.

New this year is

use of printed electrical circuits for instrument panel lights and gages . . . eliminating much wiring. One printed circuit carries turn signals, new dial-type speedometer, generator.



oil pressure and high beam signal. A second carries the fuel gage, temperature gage and brake-on warning light.

Both can be removed by loosening two screws, disconnecting the speedometer cable, unplugging one "quick disconnect" connector.

Circuit breakers are used on the power window, power seat, air conditioner, convertible top motor and heater blower circuits. They are non-recycling type, will not reset until the short is relieved or the power shut off.

Generator charging

circuit is fused to prevent possibility of burning out generator if voltage regulator cut-out points stick. Battery is now held by clamp at the bottom designed to reduce corrosion usually encountered on top clamps.

Chassis frame uses box side rails and five cross-members. There's a reinforcement plate between the No. 1 cross member and each side rail. Double-wall laminated exhaust pipes are used with aluminized muffler.

Brake secondary shoe lining is 60 per cent thicker, and a new composition is used for the primary lining. Six rivets have been added to each brake to hold linings more securely. Also there's an extra hold-down spring as well as a cross-retraction spring.



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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

CHRYSLER

Valiant

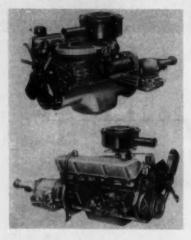
VALIANT is Chrysler's entry in the small car field. It comes in V-100 or V-200 series, both with 4door sedan, 4-door station wagon in either 6 or 9-passenger style.

VALIANT

Wheelbase is 106.5 in. Overall it measures 54 in. high, 70.4 in. wide, 184 in. long (185.1 in. for station wagons).

Its engine is a new overhead valve, 6-cyl model of 8.5 to 1 compression ratio. It's built—not just mounted—at a 30 deg slant from vertical to give lower hood height.

Four-bearing crankshaft has large overlap for rigidity. Slipper-type, cam-ground pistons have three rings



—two compression and one oil control. Combustion chambers are wedge-shape.

For adjusting valve clearance, stamped-steel rocker arms have self-locking screws. Valve stems have umbrella-type seals for oil control. To promote free rotation, exhaust valves have 4-bead locks.

Downdraft, single-barrel carburetor has new torque rod throttle linkage. Intake manifold is an aluminum casting with six long arms for individual cylinder feed.

AC alternator

replaces the generator. It is Chryslerbuilt, weighs 12 lb—9½ lb less than a conventional generator. Silicon rectifier changes current to 12-volt DC. Usual current regular/cut out is not



used. Instead there's a small voltage regulator mounted on the radiator yoke.

Alternator's main advantage is more current at idle and low engine speeds. At higher speeds, output increases to a maximum 35 amp.—from a reported 5 amp at idle.

Distributor is also Chrysler-built, has a die-cast aluminum housing. (For more details, see description of the 225-cu in. "big brother" of this engine under Plymouth.)

Clutch on the Valiant is single, dry plate type. It's operated by a suspended pedal with a pre-adjusted overcenter spring assist.

Two new transmissions

are offered. Standard is a 3-speed, manual unit. Gearshift lever is floor mounted convenient to driver's right hand.

Optional automatic transmission is the new TorqueFlite Six—an adaption of the regular TorqueFlite designed to match 6-cyl engine power output characteristics. It's smaller, weighs 100 lb less than the standard version.

TorqueFlite Six case and converter housing are one-piece, die-cast aluminum. Three-element torque converter is 10% in. in diameter, has 2.2 to 1 torque multiplication.

Parking brake

on manual transmission Valiants is cable-operated to rear wheels. With the automatic, brake is incorporated in the transmission.

Exhaust pipe is routed through the propeller shaft tunnel, giving it protection and permitting a lower floor pan. There's a new ball-joint connection where it joins the muffler.

Tubular steel propeller shaft is 2% in. in diameter. It has a trunnion universal joint at its forward end, a cross-type joint at rear.

Carrier-type rear axle has steel tubes pressed into each side of the cast carrier housing. Drive pinion has large offset to permit a lower shaft tunnel.

Brakes are self-energizing hydraulic—9-in. diameter, 2½ in. wide in front, 2 in. wide in rear. Backing plates have three stamped-in platforms that align with three projections on the shoes to give accurate alignment and good drum contact.

Unitized body is

bolted to a front structure which supports engine and front suspension. Body structure includes heavy box sections extending upward from the sills, along the sides of the roof into rear section where body locks into wheel housings. Transverse box girders span the body shell at the floor pan and at the upper and lower edges of the windshield and rear window.

Torsion Aire suspension with new rear anchors and micrometer adjustment screws is used on the Valiant.

Plymouth

PLYMOUTH for 1960 offers Savoy, Belvedere and Fury models on an 118-in. wheelbase, Deluxe, Custom and Sport Suburban station wagons on an 122-in. wheelbase.

Savoy and Belvedere lines include 2 and 4-door sedans, plus a Belvedere 2-door hardtop. Fury is offered in a 4-door sedan, 2 and 4-door hardtops and a convertible.

All station wagon lines include a 4-door, 6-passenger model with 9-passenger models available in the Custom and Sport series. Deluxe is also offered in a 2-door model.

Standard engine on

Savoy, Belvedere and Deluxe Suburban lines is the new 225-cu in. displacement, 6-cyl with 8.5 to 1 com-(TURN TO PAGE 152, PLEASE)



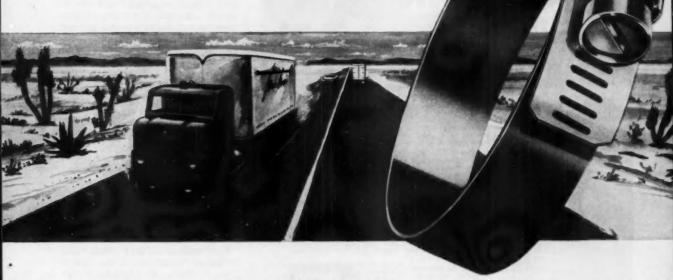


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Plymouth

Continued from Page 150

pression ratio. It's optional on the Fury 4-door sedan and 4-door, 6-passenger Custom Suburban. New 3-speed manual transmission for six's is standard with the new TorqueFlite Six automatic as an option. (For details on this, see Valiant.)

PLYMOUTH

Fury's standard engine is the 318-cu in. displacement V-8 with 0 to 1 compression ratio and 2-barrel carburetor. It's optional on Savoy and Belvedere models. New 3-speed manual transmission is standard with the regular TorqueFlite automatic optional.

Three other

engine options are offered on all models. With PowerFlite or TorqueFlite transmission, the 318-cu in. can be had with 4-barrel carburetor and special camebaft

Offered with either the new V-8 3-speed manual transmission or the regular TorqueFlite automatic is the 361 cu in. displacement V-8 with 10 to 1 compression ratio and one 4-barrel carburetor. Offered with TorqueFlite only on this engine are two 4-barrel carburetors with new ram induction.

New 3-speed

manual transmission designed for 6-cyl engines has forward ratios of 2.5, 1.68 and 1 to 1. On Fury models with standard 2-barrel carburetor, 318-cu in. V-8, same transmission is used with 2.12, 1.43 and 1 to 1 ratios.

New 3-speed manual transmission designed for V-8's has forward ratios of 2.49, 1.59 and 1 to 1. It has struttype synchronizers on second and high for cleaner shifts. Regular Torque-Flite automatic has one-piece valve body designed to channel oil flow to give smoother shifts.

New semi-centrifugal clutch used on manual transmissions has lighter pressure plates, six cylindrical flyweights and lighter spring action.

New 6-cyl, 225-cu in.

displacement engine with 8.5 to 1 compression ratio is a "big brother" of the 175 cu in. used in the Valiant.

Air cleaner, carburetor, manifolds, water pump, generator (not an alternator as on the Valiant) and starter are on the left side. Spark





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CHRYSLER

Dart

DART—or more correctly, Dodge Dart—is classed by Chrysler as a "compact" car, has its standard models on an 118-in. wheelbase—122 in. for station wagons. It measures 78 in. wide by 208.6 in. long—214.8 in. for station wagons.

It comes in Senaca, Pioneer and Phoenix models. Senaca and Pioneer models include 2- and 4-door sedans, 4-door 6-passenger station wagons. There's also a 2-door hardtop and 9passenger station wagon in the Pioneer line. Phoenix models include a 4-door sedan, 2- and 4-door hardtops, plus a convertible.

Senaca and

Pioneer are offered with the 30-deg tilt, 6-cyl, 225-cu in. displacement engine as described under Plymouth. On Dart models, it's rated 145 hp @ 4000 rpm, 215 lb ft of torque @ 2800 rpm.

(TURN TO NEXT PAGE, PLEASE)

plugs, distributor, fuel pump and oil pump and filter are on the right.

Exhaust manifold is on same side as intake manifold. Thermostatic heat control valve directs heat to an under-carburetor stove for warm up. Sensing element for the well-type automatic choke sits in a pocket in the exhaust manifold.

Cast-iron

cylinder block's skirt extends below main bearing line. Cast-iron camshaft is timing-chain driven. Valves are operated through solid tappets, tubular steel push rods and stamped rocker arms.

Lightweight aluminum parts include pistons, intake manifold, distributor housing, water pump housing, water outlet elbow, oil pump housing and oil filter mounting pad.

For other details of this engine, see Valiant description. Improvements made to all V-8 engines are described under Dart.

The 361-cu in.

V-8 ram induction option includes dual exhaust, special radiator, special clutch and heavy-duty battery. When used with TorqueFlite transmission, a high-speed governor is included to raise shift points to higher engine speeds. Details on the ram induction system are included in the Dodge description.

Exhaust pipe is routed through propeller shaft tunnel for protection and to give lower floor pan height. Torsion-Aire suspension has new rear anchors with micrometer adjusting screws.

Foot-operated parking brake is located under left side of instrument panel. For other brake changes and details on the new unit-built bodies, see Valiant description.

Swivel seat

option comes in two versions-manual and a new automatic.





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STEWART-WARNER INSTRUMENT
STEWART-WARNER

Dart

Continued from Page 153

Also offered on these models is the 318-cu in. displacement, 9 to 1 compression ratio V-8 with 2-barrel carburetor. It's rated 230 hp @ 4400 rpm, 340 lb ft of torque @ 2400 rpm.

Standard on the Phoenix is the same 318-cu in. V-8 but with 4-barrel

DART

carburetor. It's rated 255 hp @ 4400 rpm, 345 lb ft of torque @ 2800 rpm. Optional on the Phoenix is the 383-cu in. V-8 with two 4-barrel carburetors and ram induction. (For details, see Dodge description.)

On the 6-cyl

engine, standard transmission is a new 3-speed manual unit designed for this power plant (see Plymouth). Automatic option is the new Torque-Flite Six described under Valiant.

On V-8 engines other than ram induction, new 3-speed unit designed for these engines (see Plymouth) is standard. PowerFlite and TorqueFlite with new one-piece valve body to give smoother shifts are optional. Ram induction comes with TorqueFlite only.

V-8 engine

improvements include aluminized intake valves, improved cooling, heavy reinforced generator bracket, improved oil pressure relief valves, new paper fuel filter element, nylon distributor vacuum lines, improved timing chain lubrication.

There's a 3-stage piston in the carburetor linkage for better automatic choke control during warm up. Fourbarrel carburetors are revised for better operation on lean fuel air mixtures. Resistance core ignition cable is used, eliminates need for resistor plugs.

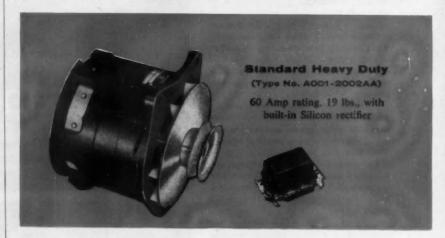
Dart features

Chrysler's new "Unibody" construction as described under Valiant. It also has an all aluminized exhaust system. Optional on station wagons is a top-mounted luggage rack. Tires on regular Dart models are 7.50-14 with 8.00-14 optional. On station wagons, the 8.00-14 is standard with 8.50-14 optional.

Chrysler's Total - Contact brakes (with improvements as described under Valiant) are used. Size is 11.5 by 2 in. on passenger cars, 11.5 by 2.5 in. on ram induction models.



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NEW 2-PIECE SYSTEMS PERFORM BETTER, CUT MAINTENANCE COSTS, CONSERVE SPACE

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CHRYSLER

Dodge

ODGE for 1960 offers two new series - Matador and Polara. Both come in 4-door sedan, 2 and 4door hardtops, 6 and 9-passenger 4door station wagons. There's also a Polara convertible.

They're on a 122-in. wheelbase,

DODGE

measure 78 in. wide by 212.6 in. long for regular models, 214.8 in. for station wagons.

Matador's standard

engine is the 361-cu in. displacement V-8 with 10 to 1 compression ratio and 2-barrel carburetor. It's rated 295 hp @ 4600 rpm, 390 lb ft of torque @ 2400 rpm. It comes with new 3-speed manual transmission as used on the Plymouth Fury with standard engine. PowerFlite and TorqueFlite automatics are options.

Polara's standard engine is the 383cu in. V-8 with 10 to 1 compression ratio and 4-barrel carburetor. It's rated 325 hp @ 4600 rpm, 425 lb ft of torque @ 2800 rpm. Standard transmission is new 3-speed unit designed for V-8's (see Plymouth) with TorqueFlite optional.

Optional on both models is the 383cu in. engine with two 4-barrel carburetors, 10 to 1 compression ratio and ram induction. It comes with TorqueFlite transmission only.

Ram induction

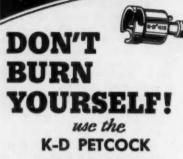
option, offered on each of Chrysler's lines except Valiant, uses 30-in. long rectangular intake tubes to "ram" fuel/air mixture into the combustion chambers. There are no moving parts. Chrysler says it gives higher torque in medium speed range.

Automatic version

of the swivel seat option work this way: Seat swings out when door is opened, swings back when door is closed. It also returns in place and latches automatically when given a gentle push.

One end of actuating cable is attached to the door. Other end attaches to a pivot plate under the seat. Pivot plate has two springs-a light one attached to the seat, heavier one at tached to the seat frame. Torsion bar spring on the door counteracts their effect so door-opening effort is not in-

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CHRYSLER

DeSoto

DESOTO for 1960 comes in Fire-Flite and Adventurer models on an 122-in. wheelbase. FireFlite measures 215.4 in. overall length, Adventurer 217 in. Both come in 4-door sedan and 2- and 4-door hardtop models.

FireFlite standard engine is the

DE SOTO

361-cu in. displacement V-8 with 10 to 1 compression ratio and 2-barrel carburetor. It's rated 295 hp @ 4600 rpm. 390 lb ft of torque @ 2400 rpm.

On this engine, the new three-speed manual transmission for V-8 engines (see description under Plymouth) is standard. PowerFlite and TorqueFlite with new one-piece valve body for smoother shifts are optional.

Adventurer standard

engine is the 383-cu in. displacement V-8 with 10 to 1 compressoin ratio, 2-barrel carburetor. It's rated 305 hp @ 4600 rpm, 410 lb ft of torque @ 2400 rpm. TorqueFlite transmission is standard.

Optional on either the FireFlite or Adventurer is the same engine with 4-barrel carburetor. This version is rated 325 hp @ at 4600 rpm, 425 lb ft of torque @ 2800 rpm. Again with TorqueFlite transmission as standard.

Ram induction option with two 4-barrel carburetors on this engine and TorqueFlite transmission is available only on the Adventurer. It's rated 330 hp@ 4800 rpm, 460 lb ft of torque @ 2800 rpm. For ram induction details, see Dodge description. For description of other V-8 engine improvements, see Dart.

Brakes, with

changes as described under Valiant, are 11 in. in diameter by 2.5 in. wide, going to 12 in. in diameter on ram induction engine models. Located under the left side of the instrument panel, the new parking brake is footoperated.

Torsion-Aire suspension has new rear anchors with micrometer adjustment screws. Exhaust piping from engine to muffler, is routed through propeller tunnel, giving greater protection as well as allowing floor pan to be dropped. Unitized body construction details are given under Valiant.

Options include improved power steering (see Chrysler), manual or automatic swivel seats (see Dodge).



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The complete goverage line

AMERICAN MOTORS

Rambler

R AMBLER for 1960 includes a 4door, 9-passenger station wagon with Captive-Air tires as standard equipment.

Other Rambler and Rebel models remain the same as last year—4-door sedan, 4-door hardtop, 4-door 6-passenger station wagon. All models are on an 108-in. wheelbase, measure about 190 in. long by 72 in. wide by 58 in. high overall.

Rambler 6-cyl engine of 195-6-cu in. displacement and 8.7 to 1 compression ratio is rated 127 hp @ 4200 rpm, 180 lb ft of torque @ 1600 rpm. With optional 2-barrel carburetor, it goes to 138 hp @ 4500 rpm. 185 lb ft of torque @ 1800 rpm.

Rebel V-8 engine of 250-cu in. displacement and 8.7 to 1 compression ratio is rated 200 hp @ 4900 rpm, 245 lb ft of torque @ 2500 rpm with 2-barrel carburetor. With optional 4-barrel carburetor, rating becomes 215 hp @ 4900 rpm, 260 lb ft of torque @ 2500 rpm.

Trunk lid features a new torsionbar hinge. Bonded brake linings replace the former riveted ones. New piston-operated vacuum booster fuel pump is used.

On the three-seat

station wagon, there's no tailgate. Door is hinged at left side, swings completely open.

Optional Flash-O-Matic automatic transmission now has free-wheeling sprag-clutch for smoother, quieter shifts with 6-cyl engine. (Clutch is similar to that already used on V-8.)

Optional equipment includes selfadjusting brakes, air conditioning, power steering, power brakes, power windows, no-slip differential.



RAMBLER

AMBASSADOR



Ambassador

AMBASSADOR models for 1960 include 4-door sedan, 6 and 9passenger 4-door station wagons in both the Super and the Custom series. Custom line also includes a 4-door hardtop and a hardtop station wagon.

Three-seat station wagon, new this year, has no tailgate. Door is hinged at left, opens fully. Captive-Air tires are standard on this model.

Wheelbase for all models is 117 in.

They measure about 198.5 in. long by 72 in. wide by 57 in. high overall.

Standard engine is

a 327-cu in. displacement V-8 with 8.7 to 1 compression ratio and 2-barrel carburetor. It's rated 250 hp @ 4700 rpm, 340 lb ft of torque @ 2600 rpm. With optional 4-barrel carburetor and 9.7 to 1 compression ratio, rating is 270 hp @ 4700 rpm, 360 lb ft of torque @ 2600 rpm.

Pre-lubricated

steering linkage ball joints have nylon

bearing surfaces, need never be lubricated. Bonded brake linings are standard.

Standard transmission is manual synchromesh. Options include overdrive and push button-operated Flash-O-Matic automatic.

Optional equipment includes air conditioning with new three-speed blower and a 19 lb lighter new aluminum compressor. Other options are power steering, power brakes, power windows, no-slip differential, Powr-Saver fan and Air-Coil Ride air suspension.





A special service for fleets that extends important price advantages to you on top quality Filter Cartridges. Ask your jobber about this service and the FREE WIX Fleet Filter Survey and WIX Fleet Manual.

Abrasive sludge is an ever-present menace that can smear a good maintenance record fast . . . infect your fleet with downtime . . . and cast a costly shadow across your whole operation. It can-if you don't guard against it constantly.

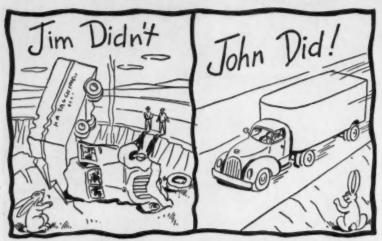
WIX has done an outstanding job in engineering and building Filter Cartridges that really guard car and truck engines. You need WIX Prescription Filtration because it provides superior filtration-filtration engineered for every engine and the particular service performed.



No matter what your special filtration problem . . . stop-and-go, high speed, high temperature, high humidity . . . WIX has the answer with maximum convenience and at minimum cost.

In Canada: Wix Corporation Ltd., Toronto
In New Zealand: Wix Corporation New Zealand Ltd., Auckland | WIX CORPORATION • • • GASTONIA, N. C.





It Pays to Be Sure! INSIST UPON Authorized MAGNAFLUX* INSPECTION

WITH EVERY OVERHAUL!

• Authorized MAGNAFLUX inspection is your best safeguard against accidents and high-cost failures. It is the same inspection used by automotive companies to detect defects in parts and materials during their manufacture. It is the only completely reliable test during overhaul to make sure that steering spindles, crankshafts, connecting rods and differential gears are free from cracks—safe to go back into service in your equipment. For longer, safer, lower cost service between overhauls, insist upon genuine inspection with MAGNAFLUX; nationally available exclusively through Authorized MAGNAFLUX Overhaul Shops.



Fluorescent Magnagle indication, as discovered on crank throw. Glowing line marks non-visible crack very near to final failure.



THE HALLMARK OF QUALITY IN TEST SYSTEMS

MAGNAFLUX CORPORATION
7308 West Lawrence Ave., Chicago 31, III.

New York 36 • Pittsburgh 36 • Cleveland 15 Detroit 11 • Dallas 35 • Los Angeles 22



Magnaglo inspection of this steering spindle gives clear indication of otherwise invisible serious cracks that could cause failure.

*T.M. Registered U.S. Patent Office

AMERICAN MOTORS

American

AMERICAN series for 1960 includes the 2-door sedan and 2-door station wagon plus a new 4-door sedan. All are on the 100-in. wheelbase, measure above 178 in. long by 73 in. wide by 58 in. high overall.

AMERICAN

Engine is 6-cyl model of 195.6-cu in. displacement and 8 to 1 compression ratio. It's rated 90 hp @ 3800 rpm, 150 lb ft of torque @ 1600 rpm.

Doors open

wider—a full 75 deg. Bonded brake linings are used on '60 models. Optional equipment includes self-adjusting brakes, power steering, Twin-Grip no-slip differential, air conditioning.

New gear shift ball socket is made of nylon, eliminates need for lubrication. New socket plus heavier return spring gives easier shifting. Manual, overdrive and automatic transmissions are available.

The Big Haul

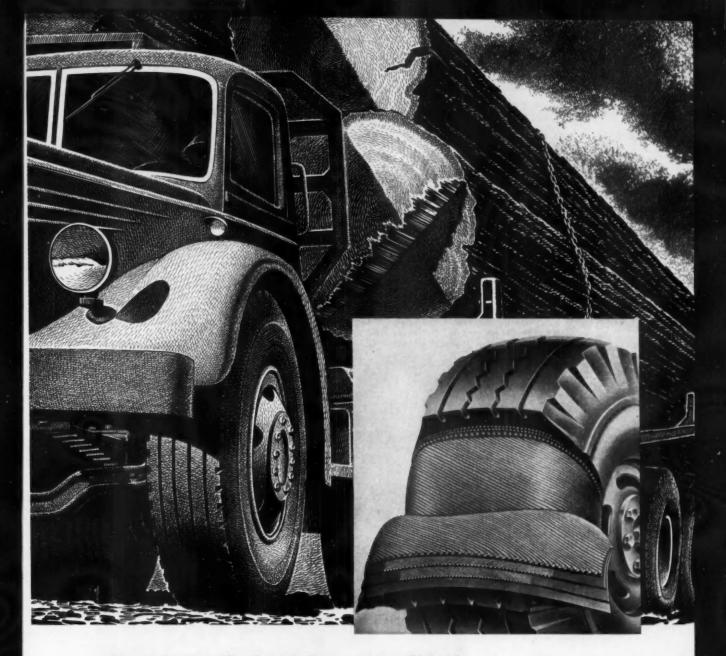
ONE OF THE largest shipments ever to move over the highway was handled by Leonard Bros. Transfer, Miami, Fla. Part of a government contract, the move originated in New England and terminated in Florida.

The loads ranged from a maximum of 14 ft high, 15½ ft wide and 62 ft long. Two lowboys, three drop frames and a specially designed trailer were required for the move.

To expedite traffic

and for transmitting orders, all cars and trucks in the move were linked by two-way RCA radios. A lead pickup truck was equipped with a telescopic height gage which measured 1 in. higher than the highest load. It stayed a half mile ahead of the convoy, then radioed back anytime an overhead obstruction appeared questionable.

This lead pickup also carried an air compressor. It was used several times when low bridges forced drivers to let air out of the tires to get the highest loads under the bridges.



Steel cord doubles tire life!

Bekaert Steel Cord-virtually indestructible, yet fully resilient-sets an entirely new standard in truck tire performance. Tires made with this high tensile carbon steel cord give up to two-and-a-half-times longer life. No more impact breaks . . . unparalleled blow out protection . . . thousands more miles, both original and retread . . . high load capacity!

Because fewer plies are necessary, tires with Bekaert Steel Cord run up to 125° cooler, eliminating tire growth and heat failure. This, plus the phenome-

nal toughness of steel cord, dramatically reduces road delays . . . assures lowest cost-per-mile performance.

Bekaert Steel Cord is now available in truck tires of Firestone, B.F. Goodrich, General Tire, Mansfield, U.S. Rubber and other leading tire companies. Steel cord tires of various manufacturers differ in construction and design, but over-the-road experience has invariably demonstrated the superiority of the steel cord over cords of any other type. Specify Bekaert Steel Cord next time you order truck tires.

Write for free booklet, "Extra Miles"

Bekaert Steel Wire Corporation 655 Madison Avenue · New York 21

BEKAERT STEEL CORD, ZWEVEGEM BELGIUM · Among Europe's Foremost Steel Wire Producers Since 1880

STUDEBAKER-PACKARD

Lark

TARK for 1960 adds a 4-door sta-Ition wagon to both its Regal and Deluxe lines . . . and a convertible in the Regal line.

Power top is standard on the convertible

Other models remain the same as last year-4-door sedans in both series, 2-door sedan and 2-door station wagon in the Deluxe series. 2door hardtop in the Regal series.

There's also a taxicab version on a 113-in. wheelbase, same as the station wagons. All other models are on an 108.5-in. wheelbase, measure 175 in. in length.

There are three engine choices. The 169.6-cu in. 6-cvl unit has 8.3 to 1 compression ratio. It's rated 90 hp @ 4000 rpm, 145 lb ft of torque @ 2000 rpm.

The 259.2-cu in. V-8 with 8.8 to 1 compression ratio is rated 180 hp @ 4500 rpm. 260 lb ft of torque @ 2800 rom with 2-barrel carburetor. Same engine with 4-barrel carburetor, goes to 195 hp @ 4500 rpm, 265 lb ft of torque @ 3000 rpm.

Optional equipment includes the "Flightomatic" automatic and overdrive transmission, Twin-Traction noslip differential, air conditioning, power steering, roof luggage carriers. rear-facing third seat for station wagons and power brakes.

Carburetor on

the 6-cyl engine has redesigned fuel passages to reduce percolation. Accelerating pump is of ball check design (replacing the disc check) to further eliminate this. Choke high idle cam has been modified to aid engine starting and warm-up. Also new is a single unit float.

Combustion chamber in the cylinder head has been modified to cut high compression "rumble." New followthrough starter drive provides positive engagement of starter until engine is running.

On 6-cyl models in the Deluxe series, the air cleaner has been redesigned to reduce air entry noise.

Both 6-cyl and V-8

engines have new fuel filters of greater density in the fuel pumps. V-8 changes also include carburetor modifications to reduce percolation and aid hot starting. Also it features a new distributor.

Electric two-speed windshield wipers are now standard across the line. Also a filter has been added between the heater core and the blower



HAWK



Hawk

CTUDEBAKER Hawk continues in 1960 as a 5-passenger sport coupe on 120.5-in. wheelbase. Engine is a 289-cu in. displacement V-8 with 8.8 to 1 compression ratio.

Standard model is rated 210 hp @ 4500 rpm, 300 lb ft of torque @ 2800 rpm. With optional 4-barrel carburetor, rating goes to 225 hp @ 4500 rpm, 305 lb ft of torque @ 3000 rpm.

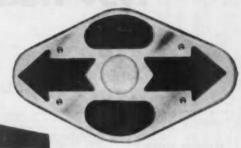
Manual, overdrive or

automatic transmissions are avail-

able. Clutch diameter is increased to 101/2 in. Finned, weather-seal type brake drums for better cooling are standard.

Optional equipment includes power brakes, power steering, air conditioning, Twin-Traction no-slip differential and tachometers.

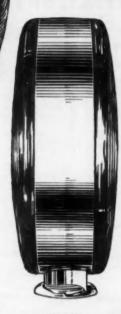
FIRST



and

In 1928, with the introduction of this "rear motor vehicle signal," Arrow became the first to make safe turns a business.

FOREMOST



Today, these new signals leave no doubt that Arrow is still first in the business of dependable safety products.

Their exclusive styling and construction sets a new standard of beauty and brawn. They feature a one-piece die-cast body, "STARBRITE" chromium or enamel finish, 4½" Lucite plastic lens, brass socket, rubber pigtail and integral mounting stud.

For complete specifications, write to:

ARROW SAFETY DEVICE CO.

PESIGNS WITH THE PLEET IN MIND

1959 Truck Specifications

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are

OPTIONAL UNITS

For the express purpose of best fit-ting the truck to the individual job most of the models listed can be pro-vided with optional engines, trans-missions, axlee, etc., and these mod-els when so equipped are considered standard stock models.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Grown MAL SERVICE
The Grown Weights published herewith are those supplied by manufacturers as their Recommended Gross
vehicle Weights for Normal Operating Conditions, and are based upon
the Maximum Authorized Tire Size
listed. In actual practice the manu-

facturer may either increase or de-crease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road con-ditions, etc., the gross weights that a manufacturer is prepared to recom-mend will vary with particular con-ditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

CHASSIS WEIGHT
The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cost, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List

MAXIMUM AUTHORIZED TIRE SIZE

THE SIZE

The tire size listed in this column is
the maximum size recommended by
the manufacturer of the chassis for
the Gross Vehicle Weight for Normal Operating Conditions. It is
furnished at extra cost, if its differs
from the standard size. Dual rears
are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamom-eter reading without accessories.

GEAR RATIO BANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are at no extra cost.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated

KEY TO ABBREVIATIONS

MAKES-ALL

All—Allison Div., General Motors Corp. B—Bendix.

B—Bendix.
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westing-

house.
C—Chevrolet.
CI or Cla—Clark.
Con—Continental.
Cu or Cum—CumminsDiesel.

Diesel.

Deu—Deutz Air Cooled
Diesel engine.

Eat—Eaton.

G-H-Goodyear-Hawley

type. GMC—General Motors

H—Hotchkies.
Her—Hercules.
HS—Hall-Scott.
Int.—International Int.—Intern Harvester.

Harvester.
L—Lockheed.
LeH—LeRoi.
LH—Lockheed front,
Wagner "hi-Tork" rear.
LT—Lockheed type front
Timken rear.
LW—Lockheed front,
Wisconsin rear.
M—Midland.

N.P.-New Process.

O or Ow—Own.
Op or Opt.—Optional.
Shu—Shuler.

icer. Timkenor Tim—Timken-Detroit Axie Co. w—Timken-Detroit—

Tw-Timken-Westinghouse. TW-Timken-Detroit-wasconsin.

Wisconsin.

Var—Varlable.

W€i—Warner Gear.

Wau—Waukesha.

W or Wis—Wisconsin.

W-B—Wagner or Bendix.

WE—Wagner Electric.

Wg—Wagner "hi-Tork."

Ws-Westinghouse. WW-Westinghouse or Wagner

REAR AXLE

Final Drive and Type
B—Bevel.
CD—Chain Drive.
F—Full-floating.
H or Hy—Hypoid.
d—Dual range axie.
2—Double Reduction.

2—Double Reduction

8—Spiral bevel.

W—Worm.

4—Three Quarters
Floating.

15—Semi-Floating.

T-Torque Tube. tandem drive.

—Planetary.

GEAR RATIOS

(**)—Only one ratio.

Drive and Torque
H—Hotchkiss (springs)
R—Radius Rods.
L—Parallel Torque Rods.
T—Torque Arm.

GOVERNOR STANDARD

KEY TO REFERENCES

—Cab Forward design. e.—Cab-Over-Engine

design.
i.e.f.—Low cab forward

design.
(D)—Diesel-engine

(B) — Diesel-engine equipped.

(T) — Designed for tractor use only.

(C) — Ford or Chevrolet Models.

(B) — Remanufactured Fords.

4— Denotes "Includes Cab" when used with weights or prices.

CHEVROLET

t-283 V-8 Trademaster

† 283 V-8 Trademaster engine available. † 283 V-8 Taskmaster engine available. 283 V-8 Super Task-master 4 barrel carburetor engine avail-

able.

— Overdrive optional.

— Powerglide available.

— Heavy duty 3 speed
transmission available.

— speed transmission
available.

— Hydramatic available.

* — 5 speed New Process
transmission available.

* — Evergriphic available.

* — Fowermatic available.

-- Front only; rear, 10/22.5D.

-- 283 V-8 Super Turbo-Fire 4 barrel carburetor engine available.

-- 4.11 with overdrive; 3.36 with Powerglide treasurateion.

3.36 with Powerglide transmissions.

2-2.70 available.

-Two speed rear axie available.

-7.17 available.

-348 V-8 Workmaster Special engine available.

able.

5 speed close ratio
Spicer available.

4—Clark 5 speed available.

3—3.92 ratio Positraction
available.

COLEMAN

*—11.00/22 also available.

*-Fu5A65 or Spicer 6352 also available.

†—Cum HRB600 also

available with horse-power of 165-1800.

DIVCO

*—Front only; rear, 7.50/

†—Front only; rear, 7.50/

-Front only; rear, 8.25/

*—Front only; rear, 7.50/

DUPLEX

1—Torque Divider, Timken T70-2 speed.

FARCO

*--With 2-speed transfer

case.

**-With 3-speed auxiliary
and 2-speed transfer

case. Chevrolet axle remanufactured.

RF—Ford axle remanufactured.

FEDERAL *—Also available with tan-dem rear axle.

Other options available.

*-Models available with tilt cabs.

KENWORTH
TK-500 PA Timken TK-

+-Both C.O.E. and cab beside engine optional.

And 8031.

MARMON-HERRING-TON

TON

-Three-speed trans. opt.

-Torque converter available.

-PM477HD and

EDN534 engines avail-

MONTPELIER

Complete vehicle.
Hercules CV4-180
engine available.

OSHKOSH -14.00/20 front.

PETERBILT PETERBILT

*-No standard wheelbases. Shorter wheelbases than figures
shown are often possible and vary with
transmission, rear axles
and fuel tanks.
†-Wide variety of options
available.

-Model OA-145 and OA-142 LPG engines can be furnished.

-Two speed axle available. 2-Model OA-100 LPG or

OA-130 engine can be on-130 engine can be furnished.

OH-160 LPG or OH-185 engine can be furnished.

Includes cab, fuel, oll,

-- Includes cab, fuel, oil, water.
-- Cummins HRFB,
NH195, NH220, NTO,
GM 6-71 engines can be furnished.
-- Model OV-235 or OV-220 LPG engine can be furnished.
-- OH-170, OA-142 LPG or OH-160 LPG or OH-185 engine can be furnished.

oH-185 engine can be furnished.
OA-145 or OA-142 LPG, OH-160 LPG or OH-185 engine can be furnished.

e_Rear only; front, 11.00/20.

STUDEBAKER

*—Two speed 5.93-8.10 or 6.48-8.86 optional.

-Two speed 6.16-8.48 or 6.61-9.09 optional.

*-Overdrive optional.

MAKE	WHEEL- BASE		-	E SIZES		ENGINE D	DETAI	LS			TRANSMISSIO	N	RI	AR A	KLE	
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1959 TRUCK SPECIFICATIONS

Continued from page 165

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dge M6-D190 M8-D190 M8-D200 M8-D200 M8-D200 M8-D300 M8-D300 M8-D300 M8-D400 M8-D400 M8-D600 M8-D600 M8-D600 M8-D600 M8-D600 M8-D600 M8-D600 M8-D600 M8-D700 M8-D600 M8-D700 M8-D800 M8	100 116 100 110 110 110 110 110 110 110 110 110 120 120 120 121 120 121 120 121 120 121 120 121 120 12	7500 7500 9000 9000 15000 15000 19500 22000 25000 25000 19500 25000 9000 15000 15000 15000 15000 15000 15000 15000		8.70/185 8.70/185 8.50/185 7/17.56 7/17.56 7/22.5 8/22.5	6.50/16\$ 6.00/16\$ 6.00/16\$ 6/10.55 6/1	Own	8-34/x49/ 8-38/x49/	230 318 230 318 230 318 251 318 251 354 354 230 318 230 318 251 318 251 318 354 354 318 354 318 318 354 318 354 358 358 358 358 358 358 358 358 358 358	8.2 7.9 8.2 7.8 7.8 7.1 8.2 7.5 7.5 7.5 7.6 7.6 7.9 8.2 7.9 8.2 7.8 8.2 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 7.8 8.2 8.2 7.8 8.2 8.2 8.2 8.2 8.2 8.2 8.2 8.2 8.2 8	202 200 202 210 210 210 222 216 222 300 319 340 300 319 202 216 222 216 222 222 216 222 222 222 22	205 4400 120 3600 125 3600 125 3600 207 4400 125 3600 207 4400 210 4400 218 3900 224 3900 210 4400 210 4400 210 3600 210 3600 210 3600 210 3600 210 3600 210 3600 210 3600	Own PC WG T85E WG T85E NP 420 NP 540	33334444445555455333344444	Own D160 Own D160 Own D160 Spi 60 Spi 60 Own D300 Own D400 Own D400 Own D400 Tim F147 Eat 1614 Eat 1614 Tim L140 Tim Q1140 Tim Q1140 Tim G141 Own P300 Own P400 Own P400 Own P400 Own P400 Tim F147 Eat 1614 Tim L140 Tim F147 Eat 1614	Hyy Hyy Hyy Hyy Hyy HYFF HFF HFF	TITITITITITITITITITITITI	4.1 -4 4.1 -4 4.1 -4 4.1 -4 4.1 -4 5.62-6 6.2 -6 6.5 -7 6.5 -7
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THE PURCHASER OF A STEAM CLEANER HAS A RIGHT TO KNOW!

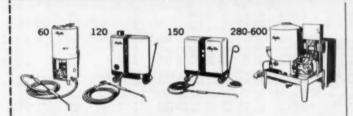
- 1. The steam cleaner being purchased is the size and type best suited to his requirements.
- 2. The exact results obtainable, through demonstration, on his own specific type of work.

THAT'S WHY Clayton the world's largest producer of steam cleaning equipment, has invested more than \$150,000 in a fleet of 30 truck-mounted demonstrating units.

DON'T TAKE OUR WORD FOR IT! See for yourself the size and type best suited for your requirements. Any of Clayton's 30 factory-trained steam cleaning engineers, each in his own truck with a full complement of cleaning equipment, will provide such a demonstration without cost or obligation.

Clayton STEAM CLEANERS

A SIZE AND MODEL FOR EVERY ASSIGNMENT - 60 TO 600 GPH



Clayton MANUFACTURING CO.
POST OFFICE BOX 550 - EL MONTE, CALIFORNIA
GENTLEMEN: We'd like your proof of which
Steam Cleaner is best for us.

MAKE US PROVE IT! Mail the coupon or tell your jobber to send the Clayton man around.

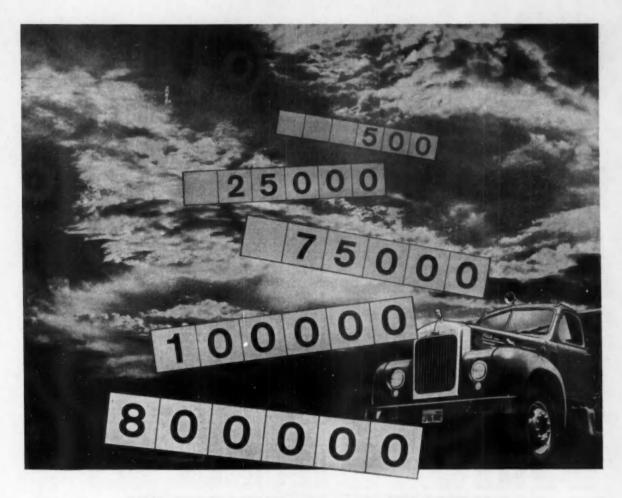
1959 TRUCK SPECIFICATIONS

Continued from page 166

	WHEEL	1		TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISSI	ON	REA	AR AX	CLE	
MAKE AND MODEL		Weight			al rear igle rear											971	
	Minimum Standard Maximum	Normal Se	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque fb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
F-600 F-760 F-760 F-760 F-760 F-760 F-760 F-760 F-760 F-860 F-100 F-100 G-100 G-1100 G-1100 G-100 G-100 G-100 G-100 F-100 G-100 G-10	132 13 132 132	4 15000 15	*4615 4870 4870 4870 4870 4870 4870 4870 4870	7/22.50 7/22.50 7/22.50 7/22.50 7/22.50 6/22.50 6/22.50 6/22.50 6/22.50 6/22.50 10/22.50 10/22.50 10/22.50 11/22.50	9/22.5 9/22.5 9/22.5 9/22.5 9/22.5 10/22.8 10/22.8 10/22.8 10/22.8 10/22.8 10/22.8 11/22.8	Ford EBS Ford EEL Ford EDL Ford EDN Ford EDN Ford EDN Ford EDN Ford EDN Ford EDN Ford EEL Ford EDL For		223 292 292 292 292 292 292 292 292 292	7.06 6.32 7.66 7.66 7.66 7.65 7.55 7.55 7.55 7.66 7.66	286 270 288 288 288 288 288 288 288 288 288 28	139 4200 187 -3800 187 -3800 187 -3800 187 -3800 187 -3800 187 -3800 187 -3800 212 -3800 222 -3800 225 -3800 2277 -3400 187 -3800 188 -4000 187 -3800 188 -4000 189 -3800 277 -3400 280 -3800 277 -3400	Ford + ord + ord + ord + ord + ord Ford Ford Ford Ford Ford Ford Ford Cla 250 V	44444465555555555554444445544444533333333	Tim C100 Tim D100 Tim D100 Tim D100 Tim P106 Eat 1814 Eat 1814 Eat 1814 Eat 1814 Eat 1814 Eat 1814 Eat 1816 Eat	SE S		8.2 - 8.8 - 8.8 - 8.8 - 8.8 - 8.8 - 8.8 - 8.8 - 8.8 - 8.8 - 7.7 - 17 - 8.8 - 8
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For references and abbreviations see page 164

Continued on page 170



How to keep your Macks in like-new condition

It's easy to keep Macks up to their original matchless efficiency. You simply maintain Mack's exclusive Balanced Design . . . in which every major Mack component is made—by Mack itself—to work in unison with every other part.

How do you maintain Balanced Design? Insist on genuine Mack parts! They're only a local call away—at your nearby Mack distributor or factory branch.

Sure, other parts may "fit the hole". But only genuine Mack parts are designed and tested by Mack engineers to perform like the original units...or perhaps better than an older original part...since

Mack components are continually being improved.

Remember. You operate the world's best trucks when you own Macks. Keep them that way with the world's best parts... made by Mack... made for Macks. Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd., Toronto, Ont.

7548

MACK FIRST NAME FOR TRUCKS

Look for these signs on highways everywhere. They're your assurance that Mack Parts and Mack Service are available wherever your Macks go.



1959 TRUCK SPECIFICATIONS

Continued from page 168

MAKE AND MODEL 	WHEEL- BASE			TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISSI	ON	RE	AR A	CLE	
		cle Weight Service	sight lion)		al rear gle rear			=		4	.W.		spee		Туре	Torque	5
	Minimum Standard Maximum Standard	Grees Vehic for Normal	Chassis Weight (See definition)	Standard Frent and Rear	Meximum Authorized Tire Size (Duals unlee	Make and Medel	No. of Cylinders, Bore and Stroke	Displaceme	Comp. Ratio	Torque Ib.	Max. Brake H.P. at R.P. Given	Make and Medel	Forward So	Make and Medel	Gear and T	Drive and	Gear Ratio Range in High
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For references and abbreviations see page 164

Continued on page 172

DID YOU KNOW Amended I. C. C. Regulations on the ADEQUACY of BRAKES and PARKING BRAKES BECOME EFFECTIVE DECEMBER 31, 1959

WHY NOT CHECK NOW & MAKE THE EASY, WISE, ECONOMICAL CHANGEOVER

Hoppenstand

SUPER AIR CHAMBERS with the *SURE-LOCK PARKING BRAKES OF

3 separate independent Brake Systems ALL IN ONE CHAMBER

Tested and Work Proved over a long period Tested and Work Proved over a long period of time on all types of heavy hauls over varied terrain. Super Air Chambers are urgently needed and are a widely welcomed development for truckers, fleet owners, in fact anyone concerned in any way with air brakes for on and off the highway vehicles.

With increased safety mandatory, the HOP-PENSTAND system with its many exclusive features certainly merits your complete investigation. You'll not be disappointed. Merely fill out and mail in the COUPON BELOW.

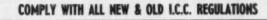


cannot be released until air system is restored to proper operating efficiency.

· Installation can be made at back or side of trailer or truck

* Parking brakes are applied by service brake application and locked mechanically. They release manually by emergency brake

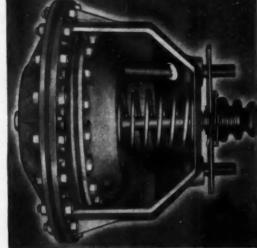
Through unique HOPPENSTAND design, this system operates without reduction of air pressure and brake cannot slip regardless of any air pressure leak. The brake holds tractor and trailer together or trailer alone.



FEATURES

- Costs less than other systems as all braking needs are in one

- Costs less than other systems as all braking needs are in one unit and no auxiliary equipment needed. Interchangeability is not affected by use of these chambers. Studs are standard and can be installed quickly. COMPLETE BRAKES regardless of partial or total regular brake system failure. EMERGENCY SYSTEM has air for 20 or more stops with a full load. FADING BRAKES ELIMINATED as double air chamber adds 2%" to the push rod stroke. Possible improper brake adjustment is thus overcome. adjustment is thus overcome.



Cutaway view of Double Air Chamber and SURE-LOCK mechanical parking brake.

NOTE: CERTAIN DESIRABLE SALES TERRITORIES YET AVAILABLE TO PROGRESSIVE DISTRIBUTORS. IF INTERESTED, PLEASE USE COUPON.

HOPPENSTAND MOTORS, INC. Albion, Penna. Pearl and Elk Streets

Please se EXPLAIN	end HOW	CO	H	ple EY	ete 1	e N(DR	la K	ta.		0	n	3	101	H	Bi	ev		A	AF	1	C	H	A	M	B		RS	
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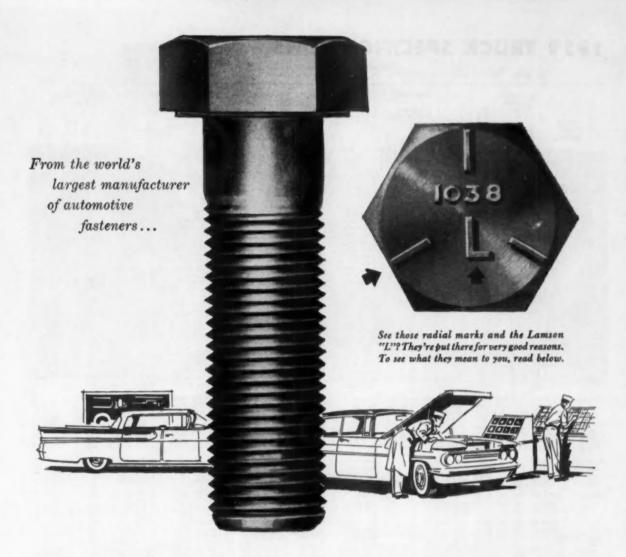
1959 TRUCK SPECIFICATIONS

Continued from page 170

	WHI		1	138	TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISSI	ON	Ri	AR A	KLE	
BRANE		36	Weight		D-du S-sin	al rear ple rear										1		
MAKE AND MODEL	Minimum Standard	Maximum Standard	88	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless neted)	Make and Medel	No. of Cylinders, Bore and Streke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Gear and Type	Drive and Torque	100
Four-Wheel Drive— Dodge M8-W100 M8-W100 M8-W200 M8-W300M M8-W300 M8-W300 M8-W300 M8-W300 M8-W300 M8-W300 M8-W300	108 108 116 116 126 129	116 116 116 116 126 129 129 174	6000 8000 9500 10000 20000		7/17.55 7/17.55 7/17.55 7/17.5 7/12.5 7/50/16 7/17.5 8/22.5 8/22.5	7/17.55 7/17.55 8/19.53 7/17.5 9.00/16 8/19.55 8/17.5 9/22.5 9/22.5	Own Own Own Own Own Own Own Own	6-31/4 x45/4 6-3.91 x3.31 6-31/4 x45/4 6-3.91 x3.31 6-3.43 x4.50 6-3.43 x4.70 6-3.91 x3.31	230 318 230 251 318	7.9 8.2 7.9 7.1 8.2 7.1	290 198 216 292 226	120-3500	NP 420 NP 420	33334444	Spi 60 Spi 60 Own W200 Own W200 Own W300M Spi 70 Tim H141 Tim H141	Hy Hy Hy HF HF HF	EEEE	4.1 -4.8 4.1 -4.8 4.1 -4.8 4.1 -4.8 4.30-5.8 4.88-5.8 4.88-5.8
Ouplex	146 146		40000 40000	^13300 ^14650	11.00/20 11.00/20	12.00/20 12.00/20	Con R8602 Cum HR8600	6-4½x5¾ 6-5½x6	602 743	6.1 16.0	485 540	200-2600 165-1800	Fu 5C650 Fu 5C650	5	Tim 1758 Tim 1758	2F 2F	H	** -8. ** -8.
(abon (c) FD201A (c) FD201B (d) FD201B (e) FD201B (e) FD201A (c) FD201C (c) FD201C (c) FD201C	130 130 130	172 172 172 174 173	19000 19000 2/000 17000 19000 20000	8700 8700 7500 8100 8000 8500	7.80/20 7.50/20 7.50/20 8.25/20 8/22.8 8/22.5 10/22.5	9.00/20 8.25/20 8.25/20 9.00/20 10/22.5 10/22.5 11/22.5	Chevrelet Ford Ford Ford Chevrolet GMC Int	6-354x3†8 8-3.8x3.1 8-3.8x3.5 8-3.8x3.5 8-374x3 8-3†4x3†6 6-3†4x4\6 8-3.8x3.6	283 347 269	7.5 7.5 7.2 8.0 7.8	215 228 286 270 317 227	132-4200 140-3900 170-3900	Ford* Chevrolet* GMC*	10 10 10 8 8	Chevrolet Ford Ford Chevrolet GMC Tim F105 Eat 1/90	Hyf HF SF Hyf Hyf HF SF	****	7.17-7. -6. 7.17-7. -7. -6.
Federal 200R44 (D) D200R44 300R44 300R44 (D) D300R44 400R44 400R44 (D) D500R44 (D) D500R44 (D) D700R44	145 145 145 145 145 145 145	193 193 193 193 193 193 193 193	22000 24000 24000 29000 29000 34000 40000	47485 47370 47945 410802 410872 411280 412332	8 .25/20 6 8.25/26 9.00/20 9.00/20 2 10.00/20 11.00/22 11.00/22 11.00/22 11.00/22	*********	Her JXD Con TD6427 Her JXLD Cum JN6B Con T6427 Cum JB5600 Con U6501 Cum HRFB600 Con R6602 Cum NHB600	6-4x41/4 6-4x41/4 6-4x41/4 6-4x41/4 6-41/4x5 6-41/4x5 6-41/4x51/4 6-51/4x6 6-51/4x6	320 427 339 401 427 401 501 743 602 743		254 307 264 290 356 350 413 550 484 535	116-2400 138-3000 125-2500 179-3000 150-2500 178-2800 180-2000 232-2800	Cla 205V Cla 290V Cla 205V Cla 290V Cla 290V Cla 290V Cla 290V Fu 5A65 Fu 5A65 Fu 5A65	555555555	Tim H140 Tim H140 Tim L140 Tim L140 Tim QT140 Tim QT140 Tim R140 Tim R140 Tim R140 Tim U200	H H H H H H2 H2		** 6. ** 6. ** 6. ** 7. ** 7. ** 7. ** 7. ** 7. ** 7.
Ford F-100 (4x4)	116 116 116 116	118	7400	3495	8 6.79/15S 6.70/15S 0 6.50/16S 0 6.50/16S	7/17.5S 7/17:5S 8/19.5S 8/19.5S	Ford EBR Ford EBR Ford EBR	6-35/x3/1 8-35/x3/1 6-35/x3/1 8-35/x3/1	223 292 223 292	7.9	269	139-4200	Ford*	3333	Ford 3300 Spi 00	H36 H36 HF HF	TITI	** -3.
FWD 1170 1191 1191 1192 1192 1193 1194 1195 1195 1195 1195 1195 1195 1195	143 143 143 143 143 144 143 144 144 144	2 215 2 216 2 202 2 203 2 203 203 2 203 2 203 2 203 2 203 2 203 2 203 2 203 2 203 2 203 2 203 20	20000 20000 28000 23000 23000 28000 28000 28000 3200 32	7620 7880 7880 11990 11990 11990 11990 11990 11990 11400 12150 12150 13100 13100 13070 1480	7.90/20D 8.25/20D 9.25/20D 9.00/20D	10.00 / 29 \$ 10.00 / 29 \$ 10.00 / 20 \$ 10.00 / 20 \$ 11.00 / 20 \$ 11.00 / 20 \$ 10.00 / 21 11.00 / 20 11.00 //20	Int BD240 Int BD284 Int BD284 Int BD288 Int RD450 Cum JT6B Int BD398 GMC 3-71 Int RD372 GMC 4-71 Int RD496 Cum JT6B Int RD490 GMC 4-71 Cum HR8B Int RD490 Cum HR8B Int RD490 Cum HR8B Wau 145GK Wau 145GK GMC 6-71 Cum Mt29 Int RD501	8-31-184-7; 8-31-181-7; 8-45-818-1	401 306 213 372 284 406 401 451 284 743 501 771 771 421 743	7.8 6.8 10.3 6.8 16.6 6.8 17.0 6.8 17.0 15.1 6.8 15.1 6.8	248 286 388 407 288 375 308 375 388 375 388 375 5444 580 280 565 565 565 565 565 565 565 565 565 56	153-380 154-380 175-250 154-380 102-210 165-320 175-250 175-250 175-250 175-300 175-180 212-300 212-300 212-300 212-20 222-225 222-225	WG T9 Int T31 Int T31 Int T31 Int T62 PFul SC85 Int T31 Int T62 PFul SC85 Int T31 Int T62 Int T61 Int	5	Own 23L Own 23L Own 23 Own 23 Own 23 Own 23 Own 23 Own 23 Own 23 Own 23 Own 33A Own 33A Own 33A Own 33A Own 33A Own 33 Own 33A Own 33 Own 34 Own 34 O	SF SF SF SF SF SF SF SF SF SF SF SF SF S	H H H H H H H H H H H H H H H H H H H	4.86-8. 4.86-8. 4.86-8. 4.18-12 4.86-8. 4.86-8. 4.86-8. 4.86-8. 4.86-8. 4.18-12 4.18-12 4.18-12 4.18-12 5.71-8. 5.71-8. 5.71-8.
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For references and abbreviations see page 164

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TWO WAYS TO BE SURE

you're not gambling on cap screw quality



When you buy cap screws, always look for the radial marks that signify high tensile strength. They're your guarantee that you're buying high carbon cap screws...fasteners that protect not only your reputation, but possibly the very lives of your customers.

Why gamble on something "just as good" to save a few pennies? Many leading automotive manufacturers insist that their dealers buy only cap screws with this industry-accepted mark of quality.

As final proof of top quality, look for the "L 1038" on the head. This identifies the L & S high carbon, double heat treated cap screw — the finest money can buy. For absolute precision, maximum strength, high torque, you just can't beat it!

LAMSON & SESSIONS

5000 TIEDEMAN ROAD . CLEVELAND, OHIO

Plants in Cleveland and Kent, Ohio . Chicago and Birmingham

1959 TRUCK SPECIFICATIONS

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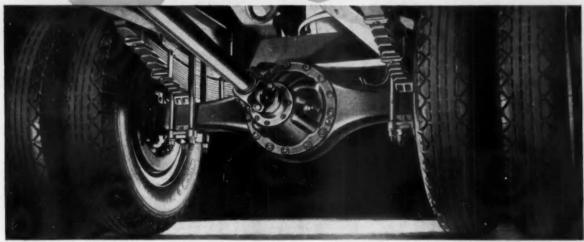
	WHEEL-			TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISSI	ON	RE	AR AX	LE	
MAKE		Velght			al rear gle rear											8	
MODEL	Ministrum Standard Maximum Standard	Gress Vehicle Weight for Normal Service	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Medel	Ne. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque Ih. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Medel	Gear and Type	Drive and Torque	Gear Ratio
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plex THI	160 20	8 40000	11500	8.25/20 10.00/20 11.00/20	9.00/20 11.00/20 12.00/20	Her JXD Con B6427 Cum HB600	6-44x436 6-44x436	320 427 677	6.6	240 325 495	141-260	0 Fu 5B332 0 Fu 5A43 0 Fu 5A920	10 5 5	Tim SD3010	BF 2F SF2	RL	8.27 6.8
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For references and abbreviations see page 164

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The superiority of a Timken-Detroit® Axle depends on the quality of all its parts...



Only genuine Timken-Detroit® Replacement Parts

can keep it as good as new!



You bought the best—replace with the best! Every genuine Timken-Detroit Axle replacement part is built to the same high quality standards as original Timken-Detroit parts. By using only genuine Timken-Detroit replacements, you can be sure of retaining the high quality and performance advantages you bought when your axle was new.

Because they are manufactured to the same rigid engineering specifications as the original equipment and carry the same manufacturer's guarantee, Timken-Detroit replacement parts save you time, money and trouble. Extra machining or fitting operations are eliminated. Labor and adjustment costs are cut to a minimum. Parts take less time to install.

Many Timken-Detroit replacement parts are packaged in convenient kits containing all the related components you need to do a "factory-type" job. These kits assure maximum protection so that every parts package you receive arrives in perfect condition.

See your factory authorized vehicle dealer for all your replacement needs. Only he can supply the parts that will *keep* your Timken-Detroit Axles as good as new.

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Transmission and Axle Division, Detroit 32, Michigan

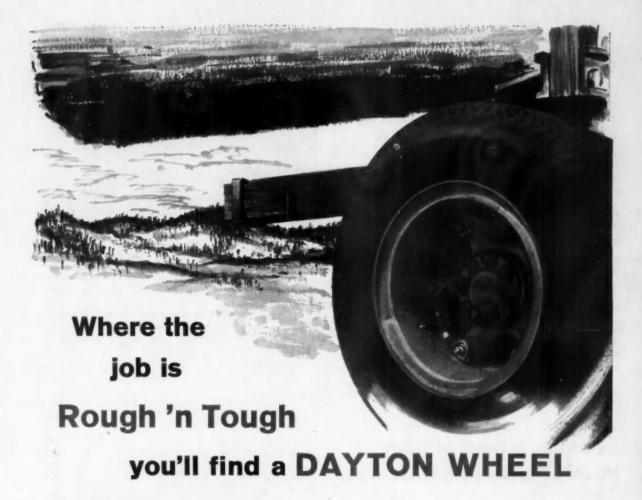
Products of

1959 TRUCK SPECIFICATIONS

Continued from page 174

	WHEEL- BASE			1	TIRE	SIZES		ENGINE D	ETA	ILS			TRANSMISSI	ON	RE	AR A)	LE	
MAKE		-	Weight			al rear gle rear								-			8	
MODEL	Minimum Standard Maximum	Standard	Gress Vehicle V for Normal Serv	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duels unless noted)	Wake and Medel	No. of Cylinders, Bore and Streke	Displacement	Cemp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Medel	Ferward Speeds	Make and Model	Gear and Type	Drive and Torque	Geer Ratio Range in High
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For references and abbreviations see page 164





Dayton Brake Drums have a reputation for quality too. These precision made, long wearing, dependable drums are standard O.E.M. equipment on most trailers. You'll be sure of the finest, safest possible equipment when you specify them on your next purchase. Let's look at some facts . . . The cost of operating mobile equipment today is high. No operator can afford too much lost operating time. You need rugged equipment that takes the beating of heavy loads, high speeds and long hard driving.

The wheels under your rig have to take that punishment. Low initial cost—repair free operation . . . safety . . . light weight . . . precision machined from fatigue-free metal . . . all are necessary in the wheels that protect the cargo you carry.

You'll find this combination only in a Dayton Cast Spoke Wheel—a wheel made from steel that has a tensile strength of 70,000 lbs. P.S.I.! That's the reason why you'll find them—almost exclusively—on equipment that carries the heaviest loads, under the most difficult conditions. Use Dayton Wheels on your equipment. They'll pay for themselves in short order.



DAYTON WHEELS





by The Dayton Steel Foundry Co.- P. O. Box 1022, Dayton 1, Ohio

World's leading manufacturer of cast wheels and brake drums

Reo Offers Three New **Pusher Chassis for Buses**

REO IS offering three new pusher chassis for school, transit or intercity buses.

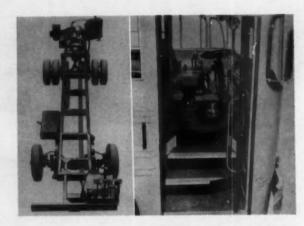
Weight distribution on the new Model Nos. C-378, C-478 and C-578 is one-third on the front axle, two-thirds on the rear. Reo says this feature-together with shorter wheelbase of forward control-gives better turning and easier handling

Reo also points out that door can be located ahead of the front wheel. This feature-together with lower frame height-permits easier entrance and exit by passengers,

especially in school buses.

Ratings are 24,000-26,000 lb GVW for the C-378 with Timken H-140 rear axle, 26,000-28,000 lb GVW for the C-478 with Timken L-140 rear axle, and 31,000 lb GVW for the C-578 with Timken QT-140 rear

Three wheelbases are offered-170, 197 and 225 in. They give 61, 67 and 73 passenger capacity, respectively. Front axles have a track in excess of 80 in., providing both a good turning angle and maximum front-end sta-



Engine choices include the

Model No. OA-145 combined with Clark 250V transmission, the Model No. OH-170 with Clark 300V transmission and the Model No. OH-185 coupled with Clark 300V transmission. Automatic transmissions offered as options include the Model No. MT-30 "ReoMatic" on the OH-170 and the Model No. MT-40 "ReoMatic" on the OH-185.

Standard on all engines are positive crankcase ventilation, full-flow oil filter, large capacity oil cooler, extra heavy duty oil bath air cleaner and 7000 sq in. radiator frontal area.

Radiant Infra-Red Heaters Warm Hard-to-Heat Garage

NEW SYSTEM of radiant heating has been installed A in Terminal Transport Company's Indianapolis (Ind.) garage. The heating system uses gas-fired radiant heat generators hung from roof beams 15 ft above the

Garage is made of corrugated steel and has a quonset type roof. Each side has three overhead truck doors. Floor area is 3648 sq ft yet the whole shop is heated by nine generators.

The direct heating system has cut

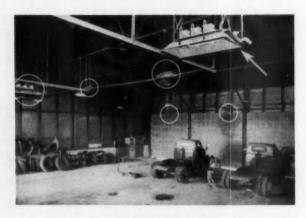
fuel bills about \$1000 over conventional warm air systems. The propane-fired units do not require fans or other circulating equipment. Heat is transferred by direct radiation. Terminal Transport's fuel cost for last season was \$1253.28 for 5585 degree days with propane at 14¢ per gal. Of this total cost, it was calculated that 30 per cent was due to opening the six overhead doors.

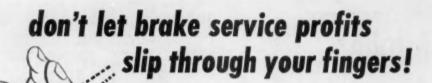
Circled in the accompanying photograph are the locations of several infra-red heaters. Note there's one above each door to combat inrushing cold air when the doors are opened. Each burner is a self-contained unit (see arrow). Each pair has its own thermostat to operate a solenoid valve. The valve opens the gas line whenever the temperature falls below the thermostat setting. A pilot light on each unit makes the system fully automatic.

The infra-red heaters are made by Perfection Industries, division of the Hupp Corp., Cleveland. Ohio. Each burner has a ceramic mat with 200 small holes per sq in. Air and gas are mixed in a chamber behind the ceramic. When burning, the flame is almost invisible as all combustion takes place within 1/4-in. of the ceramic face.

In well ventilated areas, no heater ventilation is required. Carbon monoxide content is a lot less than that permitted in domestic gas ranges. The generators are approved for indoor use in non-hazardous and semi-hazardous locations by the American Gas Assn. and Underwriters' Laboratories.

Terminal Transport reports the new heating system easily maintains a 70 deg temperature throughout the shop. The way the heaters are arranged, the garage floor is two deg warmer than the air near the roof. Trucks, tools and the floor itself are reported to be warm to the touch-even in very cold weather.





WITH THESE PROFIT-PROVEN BRAKE PARTS ASSORTMENTS

Keep the EIS parts you need RIGHT AT YOUR FINGER-TIPS! They speed your work, build your business and produce profitable turnover.

AK609-8 — THE "POPULAR-PRICE" ASSORTMENT. Contains Master and "E" Series" Wheel cylinder Kits with springs and expanders and there's plenty of room for expansion, too!



A222 "E" SERIES. Cup and Expander Assortment for most cars and light trucks.

Use "E" Series cups on all your jobs. They have been used on 70% of the American cars since 1956 (including Cadillac and Imperial).

Cups are molded of HRC (Heat-Resisting Compound),



HYDRAULIC BRAKE PARTS AND REPAIR KITS • POWER BRAKE PARTS AND KITS •

MASTER AND WHEEL CYLINDERS • BRAKE TOOLS • BRAKE HOSE •

BRAKE CABLES • BRAKE EQUIPMENT • SUPER SAE BRAKE FLUIDS

Ask your EIS Distributor or write for Catalogs! EIS AUTOMOTIVE CORP., MIDDLETOWN, CONN.

October News Roundup

No Mileage Tax on Thruway

ALBANY, N. Y.—Effective first of this month, trucks using any part of New York Thruway are exempt from New York's truck mileage tax. Formerly certain short sections of the Thruway were classed as "public highway," and truck operation on them was taxable. Thruway now has control of these sections eliminating any mileage tax liability for all Thruway operation.

NTLS Elects Frank Max

CHICAGO — New president of National Truck Leasing System is Frank Max, Jr., of Baltimore, Md. His election took place at NTLS's annual meeting held here last month. Other new officers include Nathan Katzman of New York City as vice president.

Goodrich Winners Announced

AKEON, OHIO—B. F. Goodrich Co. has awarded 311 prizes in its "Guess the mileage contest" for truck operators. Details were given in the company's advertising from April through June. Big winner—a choice between a Thunderbird or a Corvette—was A. E. Roevens, Atlantic & Gulf Stevedore

1959 Domestic Truck Factory Sales by GVW

Month	6,000 lb. and less	6,601- 10,000 lb.	10,001- 14,000 lb.	14,001- 16,000 lb.	16,001- 19,500 lb.	19,501- 26,000 lb.	26,001- 33,000 lb.	Over 33,000 lb.	Total
January	42,853 41,864 44,744	13,979 13,687 14,785	1,039 1,131 1,266	7,097 7,015 7,927 9,190	7,954 8,882 11,077	3,934 4,970 5,457	2,568 3,150 3,952	2,177 3,256 3,852	81,599 83,775 93,060
April	47,948 48,802	16,322 14,680	1,328	8,843	11,448	5,124	3,806	3,738	96,906 95,561 100,462
July	49,180 48,274	14,789 12,110	1,423	9,192	11,634 10,348	6,134 6,367	3,600	3,486 3,148	92,186
7 Mes. 1959	318,510	101,328	8,999	59,481	73,373	37,021	23,857	23,170	045,549

Source: Automobile Manufacturers Association.

Co., Houston, Texas. Next 10 winners—each receiving a Motorola TV set—were Roy G. Evans, W. J. Bullock, Inc.; Clyde Brinkerhoff, Central Steel & Wire Co.; R. C. Vickers, Miller & Miller Lines; H. L. Stockdale, Stockdale, Inc.; James Matthews, Southern Metal Products Co.; Gerhard F. Stubbs, Debus Baking Co.; Ralph L. Welle, Fergus Falls Monument Co.; Kenneth Schulz, United Auto Supply; H. E. Henthorne, Marietta Concrete Corp.; King Lynn Slaton of Corona, Cal.

NCMCA Elects Cromartie

PINEHURST, N. C.—Meeting here last month for its annual meeting, North Carolina Motor Carriers Assn. elected Luther M. Cromartie as its president. He's president of Cromartie Transport. Other new officers include James F. Boone of A. G. Boone Co. as first vice president, R. L. Burns of Bobby Burns, Inc., as second vice president. J. T. Outlaw was re-elected executive vice president.

MTA Elects Schindler

SAGINAW, MICH.—New president of Michigan Trucking Assn. is Herb Schindler, Jr., president and general manager of White Star Trucking. He was named to the office at the Association's annual meeting held here last month. Other officers elected include Philip W. Lewis of Grand Rapids Motor Express as first vice president, John A. Cooper of Cooper Supply Co. as second vice president, Charles Cooper of Holland Motor Express as secretary, James House, Jr., of James House & Sons as treasurer.

Reporting Regs Boost Accident Frequency

WASHINGTON, D. C.—Interstate Commerce Commission has just released its accident statistics for Class I passenger and property carriers for the third and fourth quarters of 1958. All four reports note that the increase in accidents may be due to the Jan. 1, 1958, revision in accident reporting requirements.

Who Can Put You "Out of Service"

WASHINGTON, D. C.—Interstate Commerce Commission has revised Sections 196.5 of its Motor Carrier Safety Regulations to define who is eligible to place trucks "Out of Service." Regulation now states "an authorized employee of this Commission" may do so . . . substituting the word "an" for "a specially." Added to Sec. 196.5 is this definition: "The

(TURN TO PAGE 188, PLEASE)

Second Quarter 1959 Intercity Truck Tonnage

By Regions

92,911

•	Quarter 1958*	Per Cent Change
	3,739 15,332 20,600 9,698 4,117 4,693	+17.0 +24.5 +33.4 +19.5 +12.8 +10.6
	6,499 3,482 8,952	+13.1 + 4.6 + 6.7

77.112

By Commodities

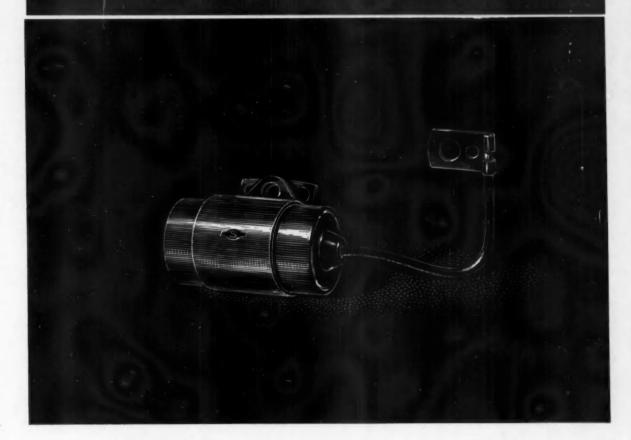
Commodity	Second Quarter 1959*	Second Quarter 1958*	Per Cent Change
General Freight. Household Goods. Heavy Machinery. Liquid Petrolsum. Refrigerated Liquide. Refrigerated Solide. Agricultural Commodities. Motor Vehicles. Building Materials. All Others.	43,557 377 1,066 21,923 358 907 1,051 3,824 2,889 17,060	34,714 341 703 19,986 335 800 983 2,289 3,740 13,303	+25.5 +10.7 +51.6 + 9.3 + 6.9 +13.4 + 7.0 +71.6 -23.3 +28.4
Total	92,911	77,112	+20.5

^{*} In thousands of tons. Covering 2196 Class 1 and 2 intercity common and contract coarriers of property as reported by American Trucking Asens.

+20.5



Stop ignition troubles before they stop your trucks



Vibration-proof and Waterproof Blue Streak *Shockmaster** Condensers

Blue Streak's new vibration-proof, waterproof Shockmaster condenser is built to last! Until now, the only really vibration-proof condensers were expensive types used on chain saws and rock-drilling equipment. But thanks to an exclusive Blue Streak encapsulation process, you can install the heavy-duty Shockmaster on your trucks—and at a price you can afford.

Blue Streak's Shockmaster is solid. (Boiling Halowax secures leads, makes windings stay put, forces out residual moisture and air.) Blue Streak's Shockmaster has welded connections (to withstand vibration and

assure maximum current conduction). Blue Streak's Shockmaster can't break down electrically. (It's pretested twice at 1500 volts, that's 5 times the maximum surge it will ever receive in your truck!) And it's unconditionally guaranteed. Smart fleet operators master their maintenance problems with Shockmaster—another Blue Streak first for all cars and trucks.

There's a Blue Streak distributor in your territory. He'll be happy to advise you. Or write for literature on the Shockmaster condenser to: Standard Motor Products, Inc., Long Island City 1, New York.

Blue Streak... Pioneers in Heavy Duty Ignition

REGULATORS • SWITCHES • COILS • CONDENSERS • CONTACT POINTS • WIRE and CABLE

Cadillac

CADILLAC for 1960 includes the Series 62, Series 62 de Ville models, Series 62 Eldorado Biarritz and Eldorado Seville, Fleetwood Series 60 Special, Fleetwood Series 75 and the Eldorado Brougham.

Not including the Brougham, all models are on a 130-in. wheelbase except the Fleetwood Series 75 with its 149.8-in, wheelbase. Standard powerplant

is the 390-cu in. V-8. Standard model (on all but the Eldorado Biarritz and Eldorado Seville) is rated 325 hp @ 4800 rpm, 430 lb ft of torque @ 3100 with 10.5 to 1 compression ratio.

Standard on the Eldorado Biarritz and Eldorado Seville and optional on other models, is the same engine with same compression ratio but rated 345 hp @ 4800 rpm, 435 lb ft of torque @ 3400 rpm.

HydraMatic transmission with

slimmer case is standard across the line. Air suspension is standard on the Eldorado Biarritz and Eldorado Seville, optional on other models . . .

Finned and

extended rear brake drums make possible use of larger wheel brake cylinders. This reduces front wheel braking load and gives cooler braking all around. Lining area is 210.32 sq in. on all but the Fleetwood Series 75 where it is 233.72 sq in.

CADILLAC

Self-adjusting brake shoes automatically adjust when car is operated in reverse. Vacuum-release parking brake automatically releases when the engine is running and the car put in gear. Automatic release feature makes it a foot-operated emergency brake also.

Also new are tapered front wheel roller bearings, pinion gear bearings, vacuum-powered safety door locks, smaller automatic headlamp dimmer (GuideMatic).



Lincoln

INCOLN for 1960 comes on a 131-in. wheelbase, measures 227.2 in. long, 80.3 in. wide, 56.7 in. high.

It's available in 4-door sedan, 2 and 4-door hardtop models in the Lincoln, Lincoln Premier and Lincoln Continental Mark V lines. Continental also comes as a convertible, limousing or town car.

Standard engine is the 430-cu in. displacement V-8 with 2-barrel carburetor and 10 to 1 compression ratio. It's rated 315 hp @ 4100 rpm, 465 lb ft of torque @ 2200 rpm.

Standard equipment on all models includes heater, radio, white wall tires, automatic transmission, power steering, power brakes, push button release parking brake.

Engine has

new 2-barrel carburetor and new intake manifold. A new thermostatically-controlled compensator gives smoother hot idle operation.

New distributor features a breaker plate mounted on three nylon buttons that require no lubrication. Heavyduty 72-amp hr battery is standard.

New fuel filter is of throw-away type. Its resin-impregnated paper element is good for 12.000 miles.

Automatic transmission has a new

governor for smoother upshifts. Two new pressure relief valves in the front clutch eliminate any tendency for clutch to bind when car is rocked.

Cast iron transmission extension contains a hydraulic dampener on its rear end. Transmission case has external ribs for stiffening. Also there's a new vibration dampener strut attached between base of converter housing and frame side rail with rubber bushings.

Wiring is

simplified by coordinating all major fuses and circuit breakers in a central power box. As described under Mercury, printed circuits are used for the instrument cluster.

LINCOLN

Biggest chassis change is adoption of Hotchkiss drive.

New 8-leaf rear spring is 60 in. long, 2½ in. wide and asymmetrically mounted to provide variable rate characteristics. There's a full length fabric liner between the 2nd and 3rd leaves.

Self-adjusting power

brakes are standard. Useable secondary lining thickness has been increased to 3/16 in.



NO OTHER UNIT LIKE IT!

MODEL 640-110

ARO-PAK

Portable Air-Charged LUBRICATOR For Easy On-or-off Lift Service . . .

Now you can save time and labor . . . step up volume and profit on your lube jobs with an ARO-PAK!

You'll find this exclusive ARO product beats hand gun greasing by a mile! It's air charged to assure smooth handling of heavy grease even in cold weather. It's light in weight and fully portable for easy one-hand operation. ARO-PAK holds 5 lbs. of grease so you can lubricate far more fittings between refills. It has ARO's famous booster control handle to give you fast, volume delivery of grease with plenty of power for toughest fittings. It's ARO-built . . . backed by nearly 30 years of lube equipment know-how! Look into ARO-PAK now for your needs in lube service, truck lubrication or as a standby unit for special calls.





FAST, EASY REFILL from your regular chassis lubricator.



SAVES TIME IN ON-OR-OFF LIFT SERVICE. Has handy strap for one-hand operation.



TRUCK LUBRICATION is fast and easy with an ARO-PAK. Sealed unit keeps grease clean.

Exclusive Features:

- PERMANENT AIR PRIME. Air charge lasts for months.
- BOOSTER CONTROL HANDLE builds pressure for toughest fittings.
- LARGE CAPACITY, holds 5 lbs. of grease.
- LIGHT WEIGHT, PORTABLE with strap for easy carrying.
- FAST, CLEAN, VOLUME DELIVERY of grease, even in cold weather.
- ONE-YEAR WARRANTY assures complete satisfaction.

Ask for Free Demonstration . . . just call your jobber, or write:

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LUBE EQUIPMENT

Automotive • Farm • Industry 30 years of know-how



Chrysler

CHRYSLER for 1960 comes in Windsor (122-in. wheelbase), Saratoga and New Yorker models (126-in, wheelbase).

Windsor and New Yorker models include 4-door sedan, 2 and 4-door hardtops, convertible, 4 and 6-passenger 4-door station wagons. Saratoga models include 4-door sedan, 2 and 4-door hardtops. TorqueFlite transmission is standard on all models.

Windsor standard

engine is the 383-cu in. V-8 with 10 to 1 compression ratio and 2-barrel carburetor. It's rated 305 hp @ 4600 rpm, 410 lb ft of torque @ 2400 rpm.

Saratoga standard engine is the

same but with 4-barrel carburetor. It's rated 325 hp @ 4600 rpm, 425 lb ft of torque @ 2800 rpm.

New Yorker standard engine is the 413-cu in. displacement V-8 with 10 to 1 compression ratio and 4-barrel carburetor. It's rated 350 hp @ 4600 rpm, 470 lb ft of torque @ 2800 rpm.

There's also a

Chrysler 300F to come "in three or four months." It will have the 413-cu in. engine with two 4-barrel carburetors and ram induction (see description under Dodge). 300F engine will also have high output camshaft, low restriction dual exhaust, high performance spark plugs and special air cleaners.

V-8 engine improvements are described under Dart. Exhaust piping comes through propeller shaft tunnel, connects to muffler through new ball-

CHRYSLER

joint connection. TorqueFlite transmission has new one-piece valve body said to give smoother shifts.

Torsion-Aire suspension has new rear anchors with micrometer adjustment screws. Parking brake is footoperated, located under left side of instrument panel. Unitized body construction and Total-Contact brake improvements are described under Valiant.

Power brakes

and power steering are standard on Saratoga and New Yorker models, optional on Windsor. Power steering improvements include new power piston seal said to boost efficiency by reducing flow of oil from one side of piston to the other and a faster acting spool valve for more precise feel.

Power windows are standard on the New Yorker, optional on other models. Other options include automatic or manual vacuum-operated door locks, automatic or manual swivel seats (see Dodge), 4-light emergency flasher system, two-speed rear window defroster.

On the manual vacuum-operated door locks, a switch controls their operation. On the automatic version, doors lock whenever engine is running. On both types, driver must be in his seat for system to operate. There's a pressure-actuated switch under the driver's seat.



Imperial

I MPERIAL for 1960 comes in Custom, Crown and LeBaron models.
All include 4-door sedan and 4-door hardtop models. In addition, there's a

2-door hardtop in Crown and Custom and a Crown convertible.

Standard engine is the 413-cu in. displacement V-8 with 10 to 1 compression ratio and 4-barrel carburetor. It's rated 350 hp @ 4600 rpm, 470 lb ft of torque @ 2800 rpm. TorqueFlite transmission with new one-piece valve body for smoother shifts

IMPERIAL

is standard. V-8 engine improvements are described under Dart.

Rear door pillar

is heavier and front pillar reinforced. Door inner panels are of heavier gage steel.

Standard on all models is a 4-way flasher emergency signal, as is the new elliptical steering wheel.

Brake improvements

include changes to the Total-Contact brakes as described under Valiant and a foot-operated parking brake located under the left side of the instrument panel.

Options include automatic swivel seats (see Dodge), manual or automatic vacuum-operated door locks (see Chrysler), power steering, power windows—including the vent windows, two-speed rear window defroster.



MACK GREAT WESTERN SERIES TRUCKS

weigh less, haul more...and they're made with tough, lightweight aluminum!

Mack Great Western Series Trucks Feature These Aluminum Parts In Eight Different Vehicles

Front bumper • Cab • Engine flywheel housing • Front and rear water manifolds • Inlet and outlet water fittings • Valve lifter covers • Cylinder head covers • Timing gear cover • Lower crankcase • Engine front support • Engine rear brackets • Transmission main case • Front spring brackets • Air reservoirs • Front and rear axle brake chamber brackets, spiders and shoes • Rear spring end housing caps • Radiator upper tank, lower tank and side plates.

Mack's great emblem of ruggedness—the bulldog—has become a symbol of lightweight strength as well. Using aluminum throughout the frame, cab and many other parts and components, Mack designers slashed dead weight (as much as $4\frac{1}{2}$ pounds a foot in the optional aluminum frame) and maintained famous Mack strength. The Great Western Series of Mack trucks can provide maximum cargo space and gross weights within legal limits—through the use of strong, light aluminum components.

Aluminum also cuts maintenance costs. It won't rust, resists corrosion, is easy to clean and keep clean. And, aluminum is strong . . . pound for pound, it's stronger than steel! Whether you build or buy highway equipment, consider the savings and design versatility of aluminum. Call your nearest Reynolds office or write Reynolds Metals Company, P.O. Box 2346-MI, Richmond 18, Virginia.

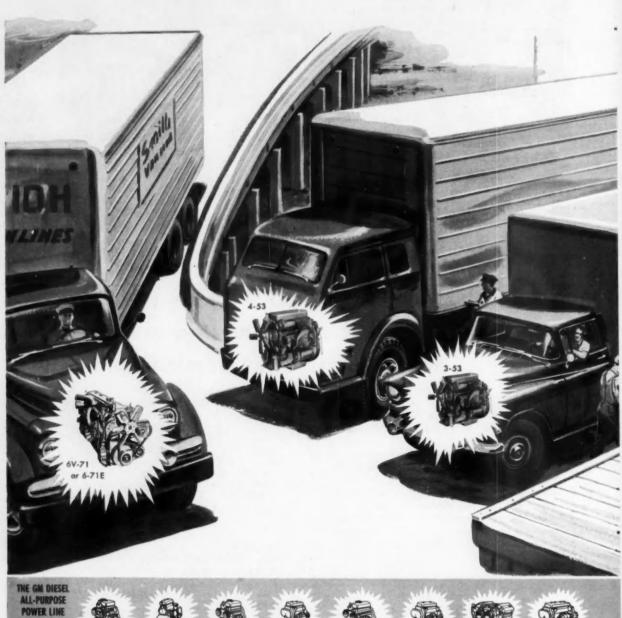


REYNOLDS ALUMINUM

Watch Reynolds TV shows—"ALL STAR GOLF" and "ADVENTURES IN PARADISE"—ABC-TV

NOW-ROLLING ON THE HIGHWAYS ...

SETTING NEW STANDARDS FOR















Series 53 and 6V-71 "Jimmy" Diesel Engines

TRUCK REPOWER SAVII



Get ready to throw away the vardsticks you've always used to measure the performance and economy of your truck engines.

Get set for some eye-opening figures on power-to-weight ratios, operating costs, mileage records, maintenance and overhaul costs.

Go to your GM Diesel Engine distributor and take a good close look at the "6V-71" and Series 53 "Jimmy" Diesel engines that are setting new standards for truck repower savings and performance.

Running big rigs? Then either the "in-line" or "6V-71" is the baby for you. The "6V-71" delivers a high torque 217 horsepower at 2100 rpm - enough to beat the schedules and top the loads you haul now.

It's over a foot shorter-200 pounds lighter-than "in-line" Diesel sixes of the same horsepower. It's the only 217 H.P. Diesel that will fit the shortest b.b.c. truck-tractor, and can haul more with a minimum of fuel.

You know the big savings Diesels have brought to crosscountry haulers-now those same savings are brought to small trucks, too. The 97-130 H.P. 3- and 4-cylinder Series 53 "Jimmy" Diesel engines fit 15,000 GVW to 40,000 GCW trucks. They can step in and repower gasoline trucks from 1½ tons up—cut operating costs 30% to 50%.

They're doing just that right now for many truckersslashing fuel bills, boosting payloads, improving performance-giving truckers savings and profits they've never come close to before.

Before you spend another nickel buying or repairing your engines-better take a look at these proven "Jimmy" Diesels. You'll find they set a new truck power savings standard that means money in the bank for you. Call uswe've got the proof.















Oct. News Roundup

Continued from Page 180

term 'an authorized employee of this Commission' means the chief and assistant chief of the Section of Field Service and the Section of Motor Carrier Safety, and all safety supervisors, district supervisors, rate agents, and safety inspectors employed in the Bureau of Motor Carriers."

Wisconsin and South Dakota End Reciprocity

MADISON, WIS. — Wisconsin Motor Vehicle Commissioner James Karns reports that South Dakota has ended reciprocity agreements with all states except those touching its borders effective first of this month. He says trucks from other than these states are liable for payment of South Dakota's mileage tax . . . and South Dakota trucks using Wisconsin highways will be required to pay Wisconsin registration fees.

Safety Starts With Seeing! SPRAGUE AIR-Pusa Windshield Wiping Equipment STANDARD on these FAMOUS TRACTORS! ON AIR EQUIPPED EMERYVILLE CONVENTIONAL AND TILT-CAB MODELS DEPENDABLE PERFORMANCE DIAMOND . DODGE . INTERNATIONAL . FACTORY INSTALLED SPECIAL EQUIPMENT FORT WAYNE KENWORTH . . REO . CAR AND FOUNDRY CO. DIVISION OF WHITE MOTOR CO. DEVICES, INC. MICHIGAN CITY, INDIANA

1959 Truck Trailer Shipments

Type of Trailer	July	Seven Months
Vane Insulated and refrigerated Steel	352 54 298 127 127	2,517 364 2,163 591 591
Furniture Steel Aluminum All other closed-tap Steel Aluminum Open-lap Steel Aluminum Aluminum	145 130 15 2,531 507 1,934 244 113 131	1,001 827 174 16,444 4,595 11,049 1,627 604 933
Total-Vans	3,399	22,180
Tanks Non- and low-presure Petroleum Carbon and alloy steel Stainless steel Aluminum.	168 27 154	1,421 179 1,012
Total-Petroleum	346	2,612
Chemical, feed, fluid solids All other, incl. aircraft	42	283
refuelers	109	1,048
chemicals, etc	33	205
Total—Tanks	530	4,145
Pole, pipe and legging Single axle	29 146	205 694
Total	175	663
Platforms Racks, livestock and stake Grain bodies, all types Platforms (flats), all types	55 160 920	302 1,062 6,235
Total-Platforms	1,135	7,619
Low-bed heavy haulers	199 165 220	1,609 1,518 1,782
Total—Complete Trailers	5,823	39,75 2
Trailer chassis	243	2,551
Total-Trailers and Chasels	6,066	42,303

Source: Industry Division, Bureau of the Consus.



New laws affecting fleet operation are summarized here for use as a guide only. Check the exact wording through your state truck or bus association, or your state's motor vehicle department, to see how the law affects your operation. The number in parentheses is the legislative bill you can use to identify the law.

New Hampshire — has increased axle weight limit for certain buses from 18,000 lb to same weight permitted trucks on designated highways (H207).

Pennsylvania—has repealed a section of the Vehicle Code which prohibits carrying other vehicles when the weight is above the cab or driver (H1430); now requires a red light on objects extending beyond the rear of

(TURN TO PAGE 192, PLEASE)

"Tolks Up" to management!



Mobil's Unique Preventive Maintenance System Helps Ease

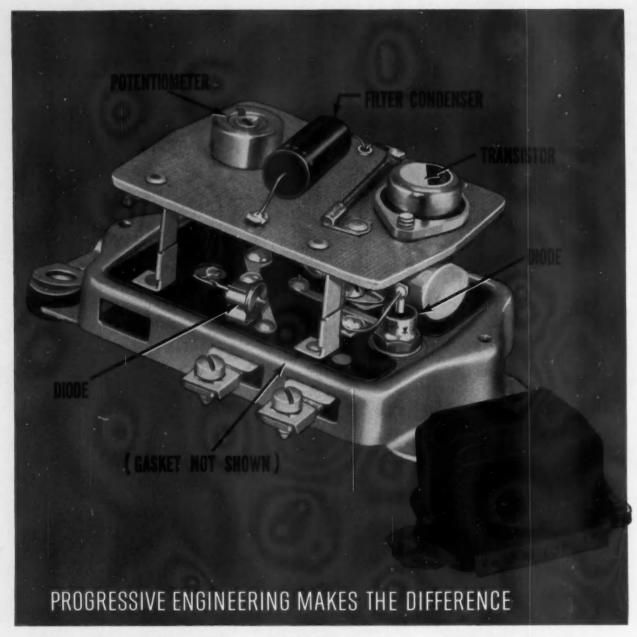
Management Problems by Telling How to Control Costs...Increase Profits!



ANOTHER REASON YOU'RE MILES AHEAD WITH MOBIL Here's the PM system with the profit story for top management. The Mobil system is as simple as a PM system can be, and yet does the best job for you. The job it does is this: it provides accurate records that allow top management to cut costs, up operating efficiency and increase equipment availability.

Why has the Mobil PM system proven itself so much more effective than others? First, simplicity . . . it gives you complete effectiveness without unnecessary paper work. Second, the top-quality fuels and lubricants that only Mobil supplies. Finally, the engineering experience and technical know-how of Mobil—leader in lubrication for 94 years.

See your Mobil representative for details of the simplest and most effective PM system available . . . the one with the "profit story" for top management.

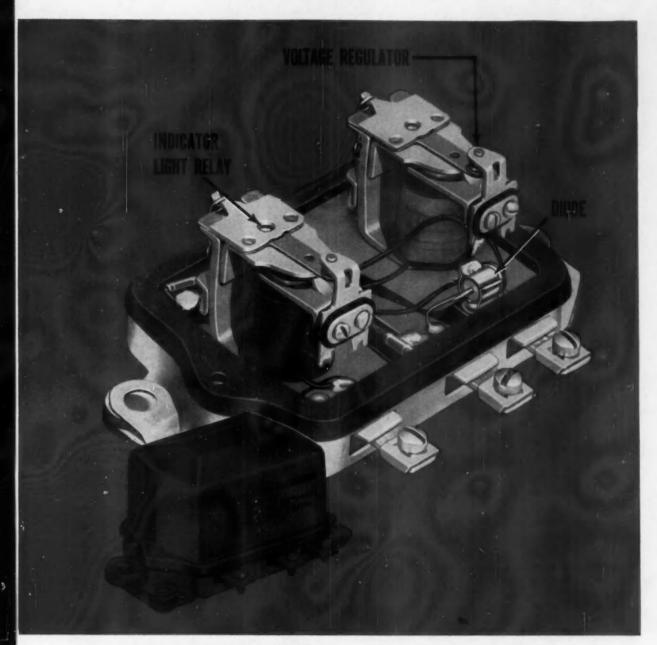


ONLY DELCO-REMY OFFERS FULL-TRANSISTOR

Designed for use with DELCO-REMY'S new self-rectifying a.c. generators

Now you can choose between two modern new Delco-Remy regulators—the most accurate available today. One is a full-transistor model, the other transistorized. The FULL-TRANSISTOR REGULATOR has no moving parts and offers the ultimate in accurate electrical performance, durability and reliability. It is composed entirely of transistors, diodes, condensers and resistors, permitting higher field current for better generator performance. Constant voltage control is unaffected by temperature changes, vibration, or mounting position. A simplified external adjusting feature permits easy voltage setting for varying operating conditions. And this full-transistor regulator requires no periodic servicing.

The transistorized regulator contains a single transistor and diode working in conjunction with a vibrating-type voltage sensing unit. The transistorized circuit



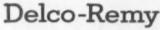
AND TRANSISTORIZED VOLTAGE REGULATORS

permits high field current for improved generator performance with low non-inductive current through the contacts for greatly extended contact life. Models are available for circuits containing either ammeters or indicator lights. All units are temperature compensated to better match battery voltage requirements.

Both the full-transistor and the transistorized models have the same mounting dimensions as standard regulators.

Whichever model you choose for your new vehicles or for replacement on present ones, you can be sure of reduced servicing and extended battery life. Available from your car or truck dealer or through the United Motors System.

FROM THE HIGHWAY TO THE STARS





ELECTRICAL SYSTEMS

DELCO-REMY . DIVISION OF GENERAL MOTORS . ANDERSON, INDIANA



Nearly two thirds of any fastening operation cost is in labor.

The Huck fastening system is designed for time saving, uniform installation with greater fastener dependability.

Huck pneumatic, hydraulic or manual installation tools are compact, light and easy to operate. Even with unskilled operators, installation rates of 25 to 30 fasteners per minute are normal.

There is a Huck fastener for every need—high shear or tension, self sealing, broad bearing, hole broaching, hollow or pin retaining, blind or regular style — aluminum, steel or high temperature metals—headstyles, diameters and lengths to fit your job.

Write for Huck's Fastener Catalog. Our experienced fastener engineers will gladly help you.



MANUFACTURING COMPANY

R3535 High strength,

broad bearing.

DR

Broad grip,

broad bearing.

OSP

Low cost blind

PT Grommet type

blind fastener.

High strength

blind fastener.

fastener.

2480 Bellevue Avenue • Detroit 7, Michigan • Phone WA 3-4500

Oct. News Roundup

Continued from Page 188

a vehicle at the same time lights are required to be displayed on vehicles. The red light must be visible for 500 ft (H1658).

Wisconsin—has created a new provision on reciprocity and proportional registration of fleet vehicles (H622); provides reciprocity for vehicles used in trailer-on-flat car services (H436).



Branch Motor Express Co., Brooklyn, N. Y., has designated October as "The Perfect Month" in its accident prevention campaign. The objective of the drive is "No preventable vehicle accidents—No personal injury accidents."

Herr's Motor Express, Quarryville, Pa., presented 32 safety awards to its drivers at the fleet's 11th annual safety banquet. Five drivers received awards for seven years of accidentfree driving. Awards were presented by Charlie Ray, vice-president of Markel Service.



National Cylinder Gas Div., Chemetron Corp., has added six new aluminum liquid oxygen semitrailers to its fleet. Trailer tanks were made by the Boulder, Colo., division of Beech Aircraft Corp. using Kaiser aluminum.

Branch Motor Express Co., Brooklyn, N. Y., has announced another half-million dollar equipment purchase. New units include 30 open top trailers, 30 tractors, 10 flat bed trailers and 10 city pickup trucks.

Transcon Lines, Los Angeles, Cal., is taking delivery on \$1\% million of new equipment. Included are 36 White Freightliner tractors and 66 Strick 40-ft closed vans.

(TURN TO PAGE 192, PLEASE)

Annuing...the latest addition to our family of quality products

MEYERCORD DRI-MARK FILMS



DRI-MARK... is Meyercord's newly perfected, custom-processed line of PRESSURE SENSITIVE signs and trade marks developed specifically for the requirements of durable Truck Signs, Window Signs, Nameplates, and Product Markings for indoor and outdoor use on both light and heavy equipment.

These startling new films include:



These high tensile strength PRESSURE SENSITIVE films and laminates give the greatest possible latitude and flexibility to the Meyercord line of products, adaptable to all of your sign needs.

DRI-MARK Decals are processed with Meyercord's own exclusive PRESSURE SENSITIVE adhesive another development of the firm that for 64 years has maintained the world's undisputed leadership in development and manufacture of Decal products.

Meyercord's in-plant Research, Art, Production and Service facilities assure the most careful processing and quality control.

Remember, when it's DRI-MARK it's MEYERCORD!

H MEYERCORD COLORGARD 70

Now . . . all Meyercord DRI-MARK films are protected by COLORGARD 70...

Meyercord's exclusive laboratory-developed and perfected clear top coat—the toughest, most durable coat yet produced for the Decal and transferable film industry. Thoroughly tested! Two years in actual use!

Whatever your sign needs, you owe it to yourself to investigate Meyercord's complete line of products. Our factory trained representatives will be glad to assist you in the proper selection of markings for any particular requirement.



	MAIL COUPON bony letterhead, please
We are interested in the follow	ring: (please check) Nameplates and product marking
Nome	
Firm Name	
Address	
City	ZoneState



BILL DICK of McNAMARA MOTOR EXPRESS, Kalamazoo, Mich., says "excel-lent engineering and careful construction are two main reasons for our recent purchase of ten more Brown Trailers. We get longer trailer life, lower maintenance costs and higher trade-in value."

On tough, daily over-the-road hauls

"We expect Brown Trailers to last longer, operate for less"

McNamara Motor Express is just one of the many carriers which has found by actual experience that Brown Trailer engineering and construction excellence add to long-range profits by increasing payloads, reducing operating and maintenance costs.

Brown Trailer Division is rapidly adding manufacturing and sales and service facilities to make these advantages available to an increasing number of customers. A new, modern

plant at Michigan City, Ind. has doubled production capacity, will speed deliveries to customers throughout the central states. New sales and service branches in all principal cities will aid dealers in giving customers fast, reliable service whenever and wherever they need it. And remember, Brown Trailers may now be purchased or leased on convenient terms.

So when you buy trailers for the long or short haul, be sure to get a quote from Brown.



rhaul System patented by Moore-Handley, Birmingham, Alabama. Morhaul is a registered trademark.



Louisville to Chicago with uncrated furniture poses a special problem. Kroehler speeds deliveries by loading specially equipped Brown containers as they would any trailer and spotting them for later pickup.

A full extra tier of many standard shipping cartons may be loaded in the NEW Brown XW Exterior-Post Trailer. Full 94" inside width, 96" height gives over 2500 cu. ft. capacity in the 40' model. And Brown's finer engineering and construction means longer life, higher trade-in.



Portland to San Francisco run includes twisting coastline, mountain grades and city traffic. Brown's Cushionair suspension eliminates dangerous cargo shifting. stops breakage of fragile cargo. And Cushionair increases legal payload 500 lb. or more.

Denver to Atlanta with 150,000 cut carnations . . . delivery must be prompt or flowers will be ruined. For over seven years, Denver Wholesale Florist Co. has delivered top-grade Colorado Carnations on time to Atlanta and the southeastern states exclusively in Brown Trailers.

Kalamazee to St. Louis is typical of McNamara Motor Express' grueling day-in, day-out hauls. Drivers praise Brown's sliding tandem which can be shifted by one man . . . terminal operators like the wide-opening doors, bright



interiors which speed cargo handling.



Brown is a registered trademark of

CLARK EQUIPMENT COMPANY BROWN TRAILER DIVISION Box 410 Michigan City, Indiana

Be sure to get a quote from Brown



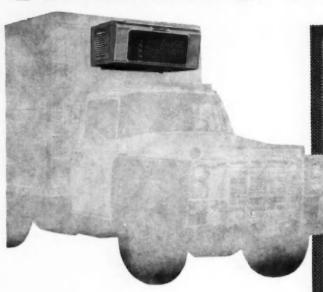


Introducing the

World's Lightweight Champion

Truck Refrigeration Unit

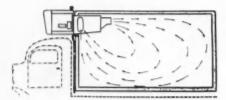
THERMO KING Model



VITAL STATISTICS

- Weighs in at only 520 pounds!
- Packs a real punch for economical cooling of straight trucks!
- · Superb for roadwork.
- Stamina proved by Thermo King's 22 years of championship training.
- Knockout power delivered by self-contained engine. Available with standby electric motor.
- Fully automatic temp control and automatic defrosting saves footwork.
- The experts say, "7 to 1 favorite...big-time money-maker in any class."

Thermo King offers a winner in mechanical truck refrigeration for straight trucks—the new model "GA". With a design proven by Thermo King's 22 years of transport refrigeration leadership, the "GA" provides economical and dependable cooling. It maintains a set temperature at the flick of a switch. The unit is powered by its own ruggedly dependable gasoline engine. This factory-packaged "GA" unit is easy to install and simple to service.





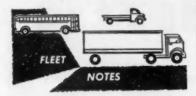
THERMO KING

For more data, see your Thermo King dealer, or write: Thermo King Corp., 314 West 90th Street, Minneapolis 20, Minnesota

World Leader in Transport Refrigeration

Oct. News Roundup

Continued from Page 192



Yale Express System, Inc., New York City, is the new name of the Yale Rental Corp. Divisions of the system include American Freight Forwarding Corp., Yale Transport Corp., Nationwide Packing Co., Shulman, Inc., and Motor Delivery, Inc.

Atlas Van-Lines, Inc., Chicago, has announced 10 new agents. They are: Acme Movers, Harrisburg, Pa.; W. D. Clark Transfer & Storage, Ponca City, Okla.; Coburn Moving & Storage, Narrows, Va.; Dempewolf Transfer & Storage, Blackwell, Okla.; Electric City Movers, Inc., Massena, N. Y.; English Moving & Storage Co., Charleston, W. Va.; Larry Fannon Van & Storage Co., Rolla, Mo.; Jones Transfer, San Jose, Cal.; Miles Moving & Storage Co., Middletown, Ohio; and Thompson's Delivery, Buffalo, N. Y.

Motor Cargo, Inc., Akron, Ohio, has started construction of a planned \$750,000 expansion program at its Akron/Cleveland terminal at West Richfield. Initial work calls for adding 18,500 sq ft of dock space.

Trailways Bus System, in a move to attract more business executives to its Five Star Luxury bus service, has installed special electrical outlets for dictating machines. They're on Five Star buses running between Washington, D. C., Baltimore, Philadelphia and New York City.



GMC Truck Division has announced that James W. (Bill) Millard has been appointed Transportation Productivity Research Manager. He will conduct studies involving development of a broader concept of highway transportation in commerce and industry.

Don't let your profits skid ...

CAMPBELL CHAINS



Keep your fleet rolling safely and profitably!

Choose the CAMPBELL TIRE CHAIN that's right for your trucks and service:

Lug-Reinforced for maximum traction and wear; Mud Service for off-the-road; Highway Service for general use.

Before the snow flies, get ready to keep your fleet rolling! Ask your jobber for information on Campbell Tire Chains. Or write direct, if you prefer.

You are assured the best delivery and service from the Campbell nationwide network of warehouses and factories.

CAMPBELL CHAIN

SAFETY MEANS PROFITS FOR YOU!

Look at the results of Truck Tests by the Committee on Winter Driving Hazards of the National Safety Council:

Average Braking Distances

1911

REGULAR TIRES—NO CHAINS
4 UNIT CHAINS—OUTER TIRE ONLY

SINGLE REGULAR CHAINS—
OUTER TIRE ONLY

130

REGULAR DUAL TRIPLE SIDE 98 CHAIN—BOTH TIRES
SINGLE REINFORCED CHAIN—91 OUTER TIRES ONLY

60 REMORED DUAL TRIPLE SEE

Draw Ber Puil in Pounds on Lake ico

1750 4 UNIT CHAINS—OUTER TIRE GRAY

1370 SHIPLE REGULAR CHAINS—
OUTER TIRE ONLY

2050 CHAIN-DOTH TIMES
2180 CHAIN-DOTH TIMES

REINFORCED DUAL TRIPLE SIDE CHAIN-BOTH TIRES 3240

CAMPBELL CHAIN Company

FACTORIES: York, Pa.; West Burlington, lows; Alvarado, Calif.
WAREHOUSES: E. Cambridge, Mass.; Chicago, Ill.; Portland, Ore.;
Soettle, Wash.; Los Angeles, Calif.





PRODUCTS

DESCRIBING RECENTLY ANNOUNCED PRODUCTS AND EQUIPMENT OF INTEREST TO MEN CONCERNED WITH TRUCK, BUS AND CONSTRUCTION FLEET MANAGEMENT

The emphasis this month is on new products designed to give you SAFER fleet operation

Windshield Wiper Motor is electrically-powered, can't "die" when the driver steps on the gas. The windshield is always clear for safer driving. Made by Robert Bosch, the



wiper motor comes in two types: Type "A" handles up to a 14-in. blade on a 14-in. arm. Type "B" handles up to an 18-in. blade on a 16-in. arm.

Contact Felix Manskleid, Adv. Mgr., Robert Bosch Corp., 40-25 Crescent St., Long Island City 1, N. Y. Phone: STilwell 6-1644.

Heated Mirror

is for both city and highway use. Mirror retracts if accidentally bumped in alleys or loading areas. The Defrost-Lite unit features an amber



clearance light plus two defrosting bulbs for fog-free vision and increased safety. Mirror is offered in both six and 12 volt models. Model No. 833 extends from 12 to 23 in. Model No. 843 extends from 17 to 29 in.

Write Power Brake Parts Mfg. Co., 3441 S. Racine Ave., Chicago 3, Ill.

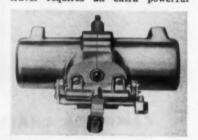
Heavy-Duty Dock Bumper is mounted on the rear of a trailer, one on each side, to protect the vehicle, dock and load. Called the HyDuty Dock Bumper, it consists of two discs of a resilient compound sandwiched between three steel plates.



Each bumper weighs about 7 lb, is easy to install.

Contact George J. Ley, Schwitzer Corp., 1155 Mass. Ave., Indianapolis 7, Ind. Phone: MElrose 6-3311.

Air-Powered Wiper Motor is the Super-Challenger designed for large windshields or where high speed travel requires an extra powerful



wiper motor to keep the windshield clear for good visibility. The new motor is the latest model added to the Air-Push Line made by Sprague Devices. It handles 25 in. wiper arms with 20 in. wiper blades. Air consumption is 1.8 cfm at 60-65 cycles, 100 psi, 140 deg oscillation range.

Write Sprague Devices, Inc., Michigan City, Ind.

Driver's Seat

is the new Level-Ride 80 made by Bostrom. New seat is said to remove 80 per cent of the jolt and jar caused by bumpy roads. Driver is not bounced around the cab, has better vision and can drive more safely.



Standard equipment on the new seat is a built-in shock absorber which cuts seat rebound and smothers severe bumps. Rubber torsion springs under the seat are still used. Seat also has a contoured back for more comfort and less "back slap."

Contact Mr. Johnston Snipes, Bostrom Corp., 138 W. Oregon St., Milwaukee 4, Wis.

Air Brake Tank

is for air reservoirs on air brake equipped vehicles. Tank is made of fiber glass, weighs up to 66 per cent less than other types. Features include increased safety, elimination of tank corrosion and maintenance, and silencing of compressor noise. Apex air brake tanks come in 7, 8 and 9½

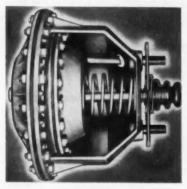


in. diameters in lengths from 13 to 72 in. Operating pressure is 125 psi.

Contact Apex Reinforced Plastics, Washington & Elm Sts., Cleveland 13, Ohio.

Air Brake Chamber

gives three separate brake systems independently operated from the same brake chamber on each wheel. Brake chamber has two parts. Inner chamber is the regular service brake chamber, is 9 in. in size. The outer chamber is 11 in., has a longer stroke for emergency stops or for use on steep grades. A parking brake is incorporated in the system and is applied by a service brake application, then locked in position by a push rod controlled by the parking brake lever.



It cannot be released unless there is safe air pressure in the system. The maker says the new brake complies with ICC Safety Regulations.

Contact Mr. David Hoppenstand, Pres., Hoppenstand Motors Inc., Pearl & Elk Sts., Albion, Pa. Phone: Albion 2761.

Warning Switch

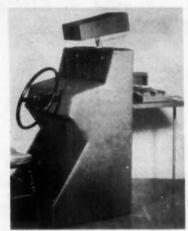
is mounted on the dash. When the driver pulls the knob, all turn signal lights—front and rear—flash simultaneously. Called the Model No. 105 Flarestat, the switch fits all vehicles regardless of wiring, circuits or volt-

age. It comes with a heavy duty flasher and plug in flasher connector.

Contact Mr. Seymour Millarman, Adv. Mgr., Signal-Stat Corp., 523-539 Kent Ave., Brooklyn 11, N. Y. Phone: SG 2-1400.

Driver-Rater

is a steering wheel unit incorporating a series of eight tests for drivers. The unit tests brake reaction time, color vision, visual acuity, glare resistance, night blindness, depth perception, field of vision and driver

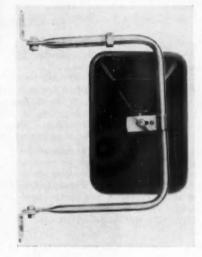


coordination. The Driver-Rater can be used in your driver training and fleet safety programs.

Contact John Renka, Pres., Educational Device Co., 66 Lafayette Ave., Suffern, N. Y. Phone: SUffern 5-1041.

Junior West Coast Mirror

is out of the driver's forward line of vision. It's mounted close to the truck and is said to overcome the problem of blind spots created by mirrors of this size which are mounted at eye level. Mirror is recommended for use

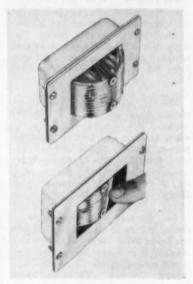


on panel, pickup and van-type trucks and buses and school buses.

Contact Robert Littleton, Arrow Safety Device Co., U. S. Route 118, Georgetown, Del. Phone: Georgetown 2516.

Retractable Marker Light

has a lens which retracts into the aluminum base when struck or bumped.



This prevents lens from breaking, saves time and money. The Robbins retractable lens lamp is said to meet all SAE and ICC marker lamp requirements. It's offered with red or amber lens, one or two bulbs, six or 12 welt.

Contact Mr. John Robbins, Pres., Robbins Light Co., Inc., 401 N. Michigan Ave., Greensburg, Ind. Phone: GReensburg 2-2054.

First Aid Kit

has a see-through window which shows if the kit is full and serviceable.



Kit has a wide selection of dressings and treatments for cuts, burns and other injuries.

Write Davis Emergency Equipment Co., 45 Halleck St., Newark 4, N. J. (TURN TO NEXT PAGE, PLEASE)



(See also Fleetmen's Library on p. 54)

Du Pont "Pyralux" fluorescent enamel for safety marking and advertising painting on trucks and trailers is described in a new folder. The high visibility paint comes in several colors. For a free copy, write Finishes Div., Du Pont Co., Wilmington 98, Del.

The 100 gph Speedystream steam cleaner is shown in a new technical bulletin. The portable unit has automatic ignition and built-in soap dispenser. Bulletin No. SC-500 is available from Mr. F. J. Riker, Mgr., Steam Generator Div., Pantex Mfg. Co., P. O. Box 660, Pawtucket, R. I. Phone: PAwtucket 2-7500.

Van Norman shop equipment is shown in a new 60-pg catalog. Shown are brake drum lathes, camshaft and crankshaft grinders, boring bars and a new rotary broach. For your copy, contact Mr. Selby F. Greer, Exec. Vice Pres., Van Norman Machine Co., 3640 Main St., Springfield 7, Mass. Phone: REpublic 7-4721.

Lenz tube fitting catalog gives full details on O-rings for hydraulic tube fittings, straight thread fittings, and two and three piece 37 deg flare tube fittings. Contact Mr. John Lenz, Pres., Lenz Co., 3301 Kleninger Rd., Dayton 6, Ohio. Phone: CRestview 7-9364. Copies are free.

Caterpillar Model No. 14 motor grader is described in a new brochure. Features include a turbocharged 150 hp diesel and an oil clutch. Construction fleets can get a free copy by writing the Caterpillar Tractor Co., Peoria, Ill., or by contacting your local Cat dealer.

Fuel oil additive manual shows problems and solutions to corrosion, rusting and sludging of fuel oils in storage tanks. Additives for combating these conditions are described. Contact the Dept. of Industrial Research, L. Sonneborn Sons, Inc., 300 4th Ave., New York 10, N. Y. Phone: ORegon 3-6000.

Emery weighing systems are described in four new fact folders. Covered are the basic art of weighing, ac-

curacy in weighing systems, the Emery "rolling ball" head and instruments used with modern weighing systems. Write Malcolm C. Tate, Sales Mgr., The A. H. Emery Co., Pine St., New Canaan, Conn.

FWD's field service program is explained in a new booklet "10 Mobile Field Service Engineers." It tells how fleet operators and maintenance supervisors can get instant help to eliminate equipment down-time. A complete listing of FWD's parts and service headquarters is included. Write the FWD Corp., Clintonville, Wis., for your free copy.

Centrifuse brake drum bulletin gives change-over data for truck and trailer rear wheel assemblies with 16½-in. brake drums. Listed is the proper Centrifuse drum by manufacturer, model, axle, brake size and type of wheel. Complete Centrifuse drum specifications are included. Get a free copy from Motor Wheel distributors or by contacting the maker direct: Motor Wheel Corp., Lansing 3, Mich. Phone: IV 2-1321.

Pyrotex bulletin from Raybestos-Manhattan describes applications of the firm's asbestos-reinforced resin plastic. Pyrotex is suitable for bushings, bearings and sealing rings and is inert to heat. Write Raybestos-Manhattan Inc., Equipment Sales Div., Bridgeport, Conn., Ask for Bulletin No. 200.

"Get Guaranteed Satisfaction" is a brochure from Caterpillar explaining three different guarantee programs on used equpment purchased through Caterpillar dealers. It's available from your local Cat dealer or by writing the Caterpillar Tractor Co., Peoria, Ill. Ask for Form No. D923.

Allis-Chalmers torque converter drive tractor shovels are described in a new 8-pg Catalog No. MS-1274. Shown are the Model HD-16G and HD-21G units. Specifications for both tractors are included. Write Allis-Chalmers Mfg. Co., Construction Machinery Div., Milwaukee 1, Wis.

The DeVilbiss service manual for 1959-60 has over 400 pages containing parts lists and information on installation, operation and maintenance of air compressors and spray equipment. Price is \$2.50 FOB Toledo. Write The DeVilbiss Co., Toledo 1, Ohio.

New Products

Continued from Page 199

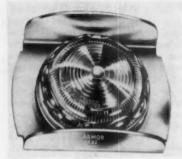
Turn Signal Lamp

has five features in one. The Speaker 6000 series is a Class A, Type 1 turn signal, stop lamp, tail light and emergency disability flare. With the speaker reflex lense it also serves as a Class A reflecter.

Contact John W. Speaker, Pres., J. W. Speaker Corp., 3059 North Weil St., Milwaukee 12, Wis. Phone: CO

Clearance Lamp

is a new thin type that extends less than one inch from the mounting surface. The Model No. 222 "Flapback" clearance and marker lamp is 2½ in.



in diameter, mounts on a weatherproof sealing pad. It has a rust-proof housing and shatter-proof lens.

Contact Mr. William Fahnestock, The Grote Mfg. Co., Lafayette & Grandview Aves., Bellevue, Ky. Phone: CO-1-5124.

Driver Alerting System is said to alert drivers should they become drowsy or inattentive on the road. The Driv-A-Lert, as it is called, works on the principle of normal steering wheel movement. If normal movement does not take place in the



normal time, a pre-set time delay sounds an alarm to "alert" the driver. A sensing unit on the steering column measures steering wheel movement and relays it to the Driv-A-Lert. The unit fits six or 12 volt systems.

Contact Edmund C. Wurst, Driv-A-Lert Corp., P.O. Box 187, Delphos, Ohio.

(TURN TO PAGE 202, PLEASE)

For your added convenience-

BOTH GREAT BRAKE FLUIDS NOW IN HANDY 12-0Z. CANS



DELCO SUPER 11 EXTRA HEAVY DUTY BRAKE FLUID

This is the brake fluid that is original equipment on all new General Motors cars—a ready-made market for replacement. Improved with HTD, Delco Super 11 flows freely at —80°F. and exceeds the minimum boiling point and all other requirements set by S.A.E. 70R1 and the new S.A.E. 70R3 specifications. It's completely compatible with rubber and metal parts, chemically inert, physically stable. Sold through United Motors System and General Motors dealers.

DELCO SUPER 99 HEAVY DUTY BRAKE FLUID

Here's heavy duty protection for cost-conscious customers. Free flowing at —60°F, and exceeds the minimum boiling point and all other requirements set by S.A.E. 70R1 specifications. It's chemically inert, physically stable and compatible with rubber or motal brake parts as well as other quality brake fluids. Sold through General Motors car and truck dealers and the United Motors System.



Both Delco brake fluids continue to be available in pints, quarts, 1-, 5-, and 30-gallon containers.

Vital Parts for Automotive Progress



Moraine Products

Division of General Motors, Dayton, Ohio



... and for

NEARBY SERVICE

on B&D tools

Black & Decker maintains 50 factory service branches plus authorized repair stations to give your B&D tools the attention every mechanical product needs periodically. Keep your B&D tools in top condition, on the job all the time.

Only factory parts and factory-approved methods are used. Fast service and reasonable cost, always.

SWIFTY SERVICE suys be sure to ask about to cost, no obligation.

STANDARD BAD GUARANTEE after completion of all recommended repair work.

You'll find the location of the nearest
B&D repair facility in the Yellow
Pages under "Tools-Electric," or
write for address to: The
BLACK & DECKER MFG.
Co., Dept. S4610.

Black & Decker

Towson 4, Md.

Quality Electric Tools

New Products

Continued from Page 200

Back-Up Alarm Bell

is a gravity actuated mechanical back-up alarm which rings in reverse only. It fits on the rear wheels, is recommended for delivery, dump and route trucks which must back-up frequently during the course of their routes. Called the Warn-A-Larm, it



helps prevent serious backing accidents caused by pedestrians or workmen not realizing that the truck is backing-up until it's too late.

Contact Arthur M. Warn, Pres., Warn Sales Co., Riverton Box 6132, Seattle 88, Wash. Phone: CHerry 4-3400.

Spark Arrester

stops sparks by cooling exhaust gases below the point of combustion. Gas enters the chamber (shown here) and dissipates heat through the double walls. Called Spark-Guard, the unit



is self-cleaning, requires no maintenance. For fire prevention safety, it is recommended for use on any vehicle or machinery where hot gases or flying sparks can cause explosions or fires.

Contact Walter Jones, Gen. Mgr., Locomotion Engineering, 933 Kifer Rd., Sunnydale, Cal. Phone: REgent 9-9516.

Auxiliary Parking Brake

gives auxiliary service to the regular air brake. Called the Berg "Airo Mech Auxiliary Parking Brake," it has a spring loaded cylinder charged by air pressure. Pressure acts against the piston which cocks the spring, releases the slack adjuster by means of a flexible cable. Loss of air pressure causes spring pressure in the unit to take up on the slack adjusters, setting the shoes against the brake drum. For parking, the driver can "dump" air which sets the brakes. Brake cannot be released until normal air pressure is restored.

Write Mr. Joe Berg, Berg Mfg. and Sales Co., 1712 South Michigan Ave., Chicago 16, Ill.

Turn Signals

are available as standard Class A signals or in combinations such as stopdirectional and stop-tail-directional. Arrow Model No. 137 is single faced, the Model No. 138 is double faced for front end installation. Known as the



Arrow D-8/7 Series, they're all avalable with or without four-way warning systems.

Contact Robert Littleton, Arrow Safety Device Co., U. S. Route 118, Georgetown, Del. Phone: Georgetown 2516.

Air Control Valve

is treadle type for foot operation. New feature includes a resistance built into the pedal so that pressure on the brake pedal is in direct proportion to the air pressure applied to the wheel cylinders. The new valve weighs two pounds, can be mounted with foot treadle or a remote mounting or as a suspended pedal.

Contact Mr. J. L. Adams, Director of Sales, Midland-Ross Corp., Owosso, Mich. Phone: SArasota 5-5161.

Brake Booster

for passenger cars and light trucks is hydraulic. It can be installed in less than 30 min, says the maker on the (TURN TO PAGE 207, PLEASE)



that has the GUTS to give you a free year's service certificate!

No other heavy-duty impact wrench can match the power, speed and maintenance-free construction of a Black & Decker. B&D backs this statement with a free service certificate good for one full year.

From drive spindle to reversing ring, every part has been designed to eliminate breakdown problems. Features like B&D's specially selected spindle bearing, lifetested impact mechanism spring (compressed in tests over 100 million times); precision machined anvil and impactor give you a lightweight, heavy-duty impact wrench packed with power and speed.

Wherever a bolt must be spun—in motor, drive-line or body work, wheel changes, and general maintenance

LEADING JOBBERS EVERYWHERE SELL

Black & Decker

QUALITY ELECTRIC TOOLS



—a Black & Decker Impact Wrench does the job faster, with less fatigue, for more profit. Remember, only Black & Decker backs tool performance with a free year's service certificate! Put one to work for...

-as little as \$2.07 a week.

No interest or carrying charges.

THE BLACK & DECKER MFG. Co., Dept.
Towson 4, Maryland (In Canada: Brockville, Ont.)
Let me know more about B&D Impact Wrenches—
FREE service certificate.

Name.....Title.....

Company.....

City Chair







NOW...TRIPHEFIRAPER

2
1

New @ OIL FILTERS GIVE YOU-

- 1 Filtering material that traps smaller particles
- 2 More usable filtering area
- 3 Greater sludge-holding capacity

The importance of an oil filter is no news to you fellows who are responsible for the efficient operation and upkeep of fleets. But, with the Triple-Trapper Oil Filter, AC breaks the biggest news story in the industry!

Here's how Triple-Trapper works:

Trap No. 1 is the filtering material itself, a resinimpregnated paper that traps particles as small as 1/15th the diameter of a human hair, particles you can't see with an ordinary microscope.

Trap No. 2 is the amount of filtering area. The AC filter has more usable area... or surface. Oil, passing through the filter, is spread out and slowed

AC PRESENTS THE ART CARNEY SHOW: NBC-TV, NOV. 13

down over this greater area. Thus, the filter has a chance to catch fine particles. The trapped particles themselves form a filter "bed," which help trap even finer particles.

Trap No. 3 is the design of the filter element, a unique arrangement of folds that provides maximum filtering area, hence maximum filtering capacity. Because of this greater capacity, the filter is able to hold *more* particles.

This gives your engine three-way protection against the damage dirt can do. It's the most advanced filtration process on the market today . . . and the finest protection money can buy. What's more, it's yours at regular price.

AC SPARK PLUG ST THE ELECTRONICS DIVISION OF GENERAL MOTORS

SAVE IN THE LONG

protection for your truck engines!

3 AC

NEW FLEET-PACKED OIL FILTERS SPECIALLY PACKAGED AND PRICED FOR FLEETS

In 24 popular types covering 85% of all trucks and fleet operation!* They include both full and partial flow types with both sock and paper elements. Filters are packed in 6-, 12- and 24-unit cartons to save you time and money. Each filter, complete with gasket, is individually wrapped in protective polyethylene. What's more, they are available locally. You can order your AC Fleet-Pucked Filters in carton lots from your nearby AC wholesaler and get immediate delivery. Call your regular AC supplier for full details.

Other applications are covered in regular AC Oil Filter line

RUN WITH AC QUALITY



3 WAYS MORE PRO



thas withstood 1,000 900 cycle test and still works perfectly

CYCLE



HAZARD-WARNING

Write for free catalog material to

YANKEE METAL PRODUCTS CORP.
NORWALK, CONNECTICUT



YANKEE GIVES

NEW YANKEE TURNFLEX SIGNAL SYSTEM³...gives your trucks more protection three ways: (1) Lucite lens exceeds 3 times candlepower required...will not warp or fade...full 43%" in diameter. (2) Rustproof...finished in Yankee blue-white chrome or rock-hard baked black enamel. (3) Rigid mounting...heavy ½" steel mounting stud cast as part of lamp.

TECTION

Approved for legal use in all states where required.

A signal system is only as good as its lamp-control switch. New Yankee TURNFLEX switch—which controls stop, tail, turn-signal and hazard-warning system—has silver-plated contacts for longer life. Mounts in seconds with its exclusive clamp-ground stainless sees band... no loose parts.

SWITCH

Yankee TURNFLEX signal system gives your trucks complete disability protection by simultaneously flashing four lamps on the vehicle—in an instant—without change in rate of flash. The red hazard-warning control lever automatically snaps off when the signal switch is re-activated.

SYSTEM

You get more for your money from Yankee...in protection...in value...in lower installation and maintenance costs...and in performance you can depend on. Call your distributor today and see for yourself how the revolutionary new Yankee TURNFLEX signal system saves you time and money.

YOU MORE

New Products

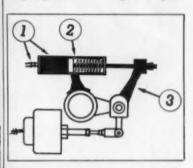
Continued from Page 202

end of the vehicle's master cylinder. Special brackets and extra pipe are not needed.

Contact Mr. Coy Ayers, Pres., Dealer Enterprises Inc., 2052 West Pico Blvd., Los Angeles 85, Calif. Phone: RRadshaw 2-7189.

Parking Brake Kit

has all parts necessary for mounting on trucks and tractors equipped with air brakes whose parking brakes do not comply with the new ICC safety regulations. The kit is the MGM Model No. 410-A. Parking brake is spring loaded. As long as air pres-



sure remains in cylinder (1), brakes remain off. When air pressure is reduced, heavy spring pressure (2) pulls against lever (3) applying the brakes.

Contact Mr. John L. Miller, Exec. VP, MGM Brakes, Inc., Miller Bldg., Cloverdale, Cal. Phone: TWinbrook 4-2511.

Fluorescent Truck Paint

is four times brighter in daylight than conventional paint. It's called Du Pont "Pyralux" and is made for high visibility vehicle marking. The fluorescent enamel is available in four brilliant colors which make your vehicles clearly visible for better safety. "Pyralux" is applied in conventional spray methods.

Contact George A. Massih, Mgr., Fabrics & Finishes Dept., E. I. du Pont de Nemours & Co., 1007 Market St., Wilmington 98, Del. Phone: PRospect 4-6637.

Anti-Fogging Liquid

is called "Alpenco" and is applied on the inside of windshields and windows (TURN TO NEXT PAGE, PLEASE)



INSTALL ZERO-START

Every Day ...

ENGINE HEATERS

- · Guaranteed fast starts
- Immediate warm engine effi-
- Eliminate need for costly indoor storage
- · Payloads arrive on time

Available in three types, headbolt—dipstick—tank. A size and model engineered for your trucks and tractors . . .

America's Quality Line



Distributed in Canada by: Pitt Distributing Co. Ltd. 80 George Street, Toronto 2, Canada

Call your distributor or write

PHILLIPS

MANUFACTURING COMPANY 8200 Grand Avenue

Minneapolis 20, Minnesota

New Products

Continued from Page 207

to prevent fogging. It is said to work under practically all conditions, helps avoid accidents by keeping the windshield clear giving the driver better vision at all times.

Contact George A. Gemunden, Albert W. Pendergast Safety Equipment Co., 6913 Tulip St., Philadelphia 35, Pa. Phone: DE 2-1663.

Dual-Faced Warning Lamp

is a high intensity emergency type for use on highway maintenance trucks, school buses, snow plows, ambulances and similar vehicles. It's the



Grote Model No. D-257, has two 7-in. shatterproof plastic lenses available in red, amber or blue.

Contact William Fahnstock, The Grote Mfg. Co., Lafayette & Grandview, Bellevue, Ky. Phone: CO 1-5124.

Truck Safety Signs

are die cut from pressure sensitive "Scotchlite" for use in fleet marking. The signs are self-illuminating as they reflect light. They can be applied to any surface by peeling off the backing and placing the sign in the desired position. Signs are made from Scotchlite Brand reflective sheeting, is said to be 200 times brighter than white paint. Barricade type signs for the rear of trucks and trailers are also available.

Write Fleetmark Div., Mask-Off Co., 345 W. Maple Ave., Monrovia, Cal.

Truck Muffler

is especially made for the White Model Nos. 470A and 490A Mustang engines. The new ATI mufflers are (TURN TO PAGE 212, PLEASE)



Eliminates "BARE VALVE" HANDLING

- ALLOWS VISUAL COMPARISON WHEN HANDLING
- CUTS STOCK LOSSES DUE TO RUST FROM HANDLING
- KEEPS VALVES LOOKING FRESH AND NEW
- SHRINKS VALVE SHELF RE-QUIREMENTS
- · APPEALS TO THE MECHANIC
- RECEIVES THE RMC EXTRA 10% STOCKING JOBBER DISCOUNT

EASY TO OPEN

Just hold head of valve and skin wrap over stem.



OTHER RMC VALVE TRAIN PARTS

VALVE SPRINGS • SEATS-GUIDES • ROTOCAPS ROTO ASSEMBLIES • VALVE TAPPETS VALVE SPRING INSERTS

WAREHOUSED IN ALL PRINCIPAL CITIES

POR NAME OF NEAREST
DISTRIBUTOR WRITE TO:
MANUFACTURING CORP.
BATTLE CREEK, MICH.

† Operators report:

"THESE FIRESTONES DOUBLE OUR DRIVE-WHEEL MILEAGE!"





You can count on double drive-wheel mileage when you mount Firestone Super Mileage Transport* Cross Bar tires! Firestone designs these great tires especially for the tremendous torque pressures of drive-wheel duty!

Built with Firestone Rubber-X, the longest-wearing rubber ever used in Firestone tires, Super Mileage Transport Cross Bars have 93% extra tread depth. That's the Firestone extra that gives you double the mileage on original treads—then 25% more miles from regrooving! There's plenty of traction for all the latest increased power units, too. Extra thick treads and

shoulders reduce punctures and costly downtime. And the all-nylon Firestone S/F (Shock-Fortified) cord body withstands more impacts, helps prevent heat blowouts and flex breaks. Exhaustive proving ground tests and millions of miles on the country's leading truck fleets proved it!

Ask your Firestone Dealer or Store about tubeless or tubed Super Mileage Transport Cross Bar drive-wheel tires. Their big bonus mileage will mean lower overall tire costs for you. And when buying new equipment, be sure to specify Firestone tires.

*FIRESTONE T.M.

†Names of fleet operators on request.



TRANSPORTS

SUPER MILEAGE TRANSPORTS SUPER MILEAGE

SUPER ALL TRACTIONS



BETTER RUBBER FROM START TO FINISH

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TO BRING
PRODUCTS AS
CLOSE TO YOU
AS THEY CAN
BE BROUGHT
IN PRINT:



COMMERCIAL CAR JOURNAL'S

51960 FLEET BUYERS' DIRECTORY

NOVEMBER, 1959

Completely modernized to help you buy better, the 1960 COMMERCIAL CAR JOURNAL Fleet Buyers' Directory

gives you

NEW easy-to-read typography

NEW

makeup — products are listed alphabetically in one section, manufacturers are listed alphabetically in another section.

NEW

bold-face listings for CCJ advertisers
— making it easy for you to find out
more about the products you need.

NEW

"where to buy it" listings —
manufacturers' directories of their regional
managers, branch offices, warehouses, etc.,
listed for your convenience.

NEW

— with this issue of CCJ's annual Fleet Buyers' Directory, you receive the bonus of a complete Association Directory, included with the issue.

More than 7,000 sources of 750 kinds of products vital to truck, bus, trailer and car fleets will be at your fingertips throughout the year in the 1960 Commercial Car Journal Fleet Buyers Directory, published in November, 1959.

Watch for the November Commercial Car Journal — CCJ's 1960 Fleet Buyers' Directory. It will be one of your best buying tools during 1960.



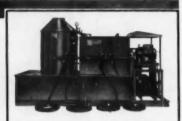
COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION Chestnut and 56th Streets Philadelphia 39, Pennsylvania SHerwood 8-2000



Take grief out of equipment cleaning with

MALSBARY HPC CLEANING SYSTEM



Here's the speediest, most efficient system on the market for cleaning equipment, parts, etc. — the all-in-one compact, multipurpose package. Whether your cleaning involves layers of greasy dirt that cause engine overheating . . . heavy, abrasive grime . . . ice and frozen mud . . . dirty parts that slow mechanics . . . degassing tanks for new cargoes or welding repairs . . . too much downtime for cleaning — you'll find the Malsbary HPC system a quick, money-making solution to your equipment cleaning problems.

Key to fast, effective cleaning is the heat, pressure and volume delivered by the Malsbary HPC system. You get:

Hot solution at thermal-hydraulic pressures 2 to 4 times greater than any steam cleaner . . . hot or cold water at a dirt-blasting 300-400 psi . . . gentle rinse or wash water . . . wet steam for degassing and heating . . . and greatest time saver of all, hot solution and cold water, or wet steam and cold water, simultaneously from 2 to 4 guns.

More than 6000 in use. See for yourself how the Malsbary HPC system breezes through the toughest cleaning jobs. Ask your Malsbary dealer about 10-day buy-and-try plan . . . see phone book yellow pages or write us, outlining your cleaning problems.

136

ASK ABOUT the Malsbary green steam cleaner hose . . . it's durable, oil and abrasion resistant.



New Products

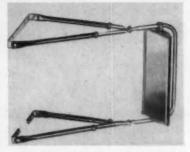
Continued from Page 208

said to reduce back pressure up to 25 per cent, yet silence the engine well under the 125 sone limit. This makes safer operation and helps to decrease driver fatigue.

Contact E. N. Alexander, Pres., Alexander-Tagg Industries, Inc., Hatboro, Pa. Phone: OSborne 5-7200.

West Coast Mirror

measures 6 x 16 in., has a wide range rear view for added safety. Called the Speaker West Coast Mirror, it comes with mounting arms which ex-

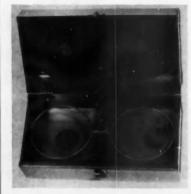


extend 18 to 30 in. Mirror is adjustable up and down, back and forth, and side to side.

Contact John W. Speaker, Pres., J. W. Speaker Corp., 3059 N. Weil St., Milwaukee 12, Wis. Phone: CO 4-0500.

Spare Bulb and Fuse Kit

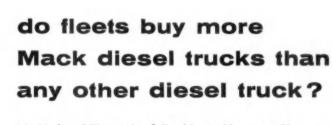
holds two sealed beam headlamps plus 15 spare bulbs and nine fuses. It's the Dietz Model No. 870-2 safety kit. Lamps are held in place on sponge rubber cushions by snap-spring wire



holders. Another cushion covers the lid, has perforated holes which hold spare bulbs and fuses.

Write the R. E. Dietz Co., 225 Wilkinson St., Syracuse 1, N. Y.

(TURN TO PAGE 217, PLEASE)



Mack's famed Thermodyne® diesel is one big reason. Unsurpassed in performance, matchless in fuel and maintenance economy and dependably rugged, the Mack diesel-powered truck has been the No. 1 selection of fleet owners for over six straight years—by an almost 2-to-1 margin over its nearest competitor. No other truck engine in the nation has the proved high thermal efficiency of the Mack Thermodyne diesel—published operating figures of leading fleets verify this fact.

Long trouble-free life is another proved advantage of the Mack Thermodyne diesel. Engine components such as everlasting timing gears... Durafaced valve lifters... Permafit valve seat inserts... angle-split connecting rods... full-length water jackets... help to assure maximum engine service life with minimum maintenance.

Couple the advantages of the great Mack Thermodyne diesel with those of another famed Mack exclusive—Balanced Design—and you'll see why fleet after fleet has standardized on Macks.



Thermodyne Diesel Power

Prime reasons why more fleets



Remember)

Features that make MACK 1st in diesel truck

plus MACK Balanced Design

are buying more Macks

Mack Thermodyne power plus Balanced Design gives you an unbeatable combination. Mack Balanced Design means that all major components—from engine to rear axle—are engineered and built to work in harmony as a single, economical, sweet-responding unit.

Only Mack can offer such a combination because only Mack builds its own major components. Other truck manufacturers utilize components made primarily for the mass producers. However, because of Balanced Design, there's never a weak link when "It's Built like a Mack."

MACK THERMODYNE DIESEL ENGINE. Undisputed leader in fuel and maintenance economy, as well as in smooth and smokeless operation, Mack's top-performing Thermodyne diesel is the key reason why Mack is No. 1 in diesel truck sales . . . leading its nearest competitor almost 2 to 1. Turbocharged version, 205 horsepower.

MACK TRANSMISSIONS. Strangers to the repair shop, Mack transmissions like this even-split, 10-speed, single-lever Unishift are quieter operating and longer lived because of Mack's exclusive Tetrapoid tooth design. Where 15 speeds are required, Mack offers its exclusive single-unit Triplex.

3 MACK UNITIZED B MODEL CAB. Minimum of maintenance is required and good appearance preserved because cab, fenders, running boards, hood and radiator shell are joined as a integral unit and supported at four points in diamond formation through rubber cushions. Entire assembly is therefore unaffected by frame distortion, and fight between units is avoided.

4 MACK REAR AXLES. Stronger, tougher, longer-lasting rear ends result from Mack exclusives—graduated heat-treated axle shafts for a tough core and a hard, strong surface... involute splines which can withstand four times the shock loads of rectangular types... single or Dual Reduction gearing of Mack Orthopoid design for longest gear life, maximum

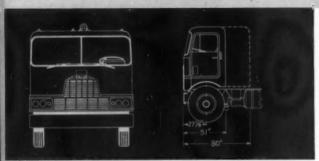
strength and quietness. For lightweight four-wheel-drive tandems, the famous Mack Balanced Bogie incorporates all of these features plus: exclusive self-steering for unequalled tire life...elimination of tire matching... Mack Power Divider for better maintenance of schedules under all driving conditions because it automatically assures maximum tractive ability.

has the compact design to meet your highway needs

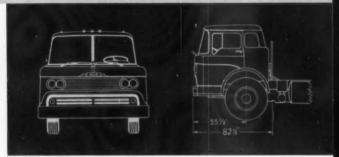
Choose the model that best fits your fleet operation

Now...only Mack makes four separate compact haulers, each in a wide range of models...all designed to haul maximum length high-cube square-nose trailers. These tractors include weight-reduced models for maximum payloads. Every one is a Mack from the word "Go!"...because every one is Built like a Mack.

FOUR COMPACT DESIGNS



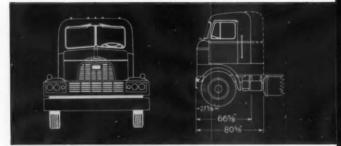
MODEL G—Brand new and only 51" from bumper to back of cab, 80" with full-width sleeper. With front axle set forward for maximum payloads in bridge formula areas, Mack's G Series tractor handles gross weights to 76,800 lbs. Eight different models, all with all-aluminum deluxe unitized cabs. Full choice of transmissions, including 15-speed Triplex... option on six-wheelers of pusher-type bogie or Mack's lightweight Balanced Bogie with Power Divider.



MODEL N—Set-back front axle and forward cab location of N Series with 82½" BBC provide fleet owners with ideal gross weight distribution for maximum axle loading. Plenty of glass area for maximum vision...up to 205 Mack horsepower for on-time schedules. Short wheelbase provides easier handling and smaller turning radius. Flat floor in lower capacity models ideal for city delivery.



MODEL 8—Sturdy backbone of the Mack line, 89" BBC Model B features the Mack Contour Cab and, of course, Mack Unitized construction. Maintenance is simple...components are fully accessible. Powered by famed Mack Thermodyne diesel from 170 to 205 hp, or by Mack Thermodyne or Magnadyne gasoline engines. Choice of 5- to 15-speed transmissions...4- or 6-wheel models.



MODEL H—Hauls maximum loads with maximum-length trailers in bridge formula areas. Measures only 67" BBC (81" with integral sleeper), provides driver with excellent view of road because of elevated cab. Powered by Mack diesels up to 205 hp, Model H is available with 5- to 15-speed transmissions. Available with either Mack single or Dual Reduction rear axles or either of two bogies—pusher-type or Mack Balanced Bogie with exclusive Mack Power Divider.

MACK FIRST NAME FOR TRUCKS

Mack Trucks, Inc., Plainfield. New Jersey. In Canada: Mack Trucks of Canada, Ltd., Toronto, Ont.



New Products

Continued from Page 212

Air Hand Control Valve

gives safer, more positive brake control and longer brake lining life, says the maker Midland-Ross. The control valve is made of aluminum, responds instantly to the slightest movement. can be applied or released faster. It's used as the independent control valve for trailer wheels.

Contact Mr. J. L. Adams, Dir. of Sales, Midland-Ross Corp., Owosso, Mich. Phone: SAratoga 5-5161.

Truck Mirror Assemblies

are offered with either telescoping or fixed arms. Mirror heads are 51/2 x 71/2 in., are available with hinge type or body-mount type brackets. The new



Pathfinder models are offered optionally with non-glare glass.

Contact A. Milman, Auto Lamp Mfg. Co., 29095 Indiana Ave., Chicago 4. Ill. Phone: CA 5-8800.

Nylon Cord Tire

is the Gates nylon "Super Cross Bar" model. It's for use on truck drive wheels and long distance hauling. Tire has a nylon cord body and a new flatter tread said to be 60 per cent deeper than in previous models. It has a continuous center rib.

Contact Mr. Joe Bradley, Market Mgr., The Gates Rubber Company, 999 South Broadway, Denver 17, Colo. Phone: SHerman 4-1911.

Bench Grinder

the new Model No. 166 is a 4-hp unit for buffing, grinding and brush-(TURN TO PAGE 220, PLEASE)





truck operation for little more than 2¢ per day

When you equip a truck with a Tachograph you are able to get a complete graphic report on all starts, idling, stops, and speeds encountered on the run. The chart (which costs you about 2¢ each) is taken out of the Tachograph at the end of the day. The data recorded provides you with the information you can use to cut unscheduled stops, plan better routes, lower operating and maintenance costs, and help make drivers more safety conscious. For details, mail the coupon.



Washer Electric Corporation 6476 PLYMOUTH AVE . ST. LOUIS 14, MO. and a copy of Bullatia SILS

Name	
Company	
Address	
City	State
We operate	Vehicles

Challenge to Truck Buyers -



Pick the salesman who'll

A salesman has to do more than promise...

Take a White man. He may look like any other truck salesman. But there the similarity ends. The White man doesn't come in with an "off-the-shelf" truck. He starts with two advantages that benefit you. First, he's thoroughly schooled—not only in his business but in the best hauling practices in yours.

Second, he has White's custom-engineering to help him design the truck that will do your job best.

In fact, your company name goes with your truck every inch of the production line—from the first laying of the chassis rails to the last coat of paint. It's your built-to-order White, not just an adaptation of a truck built for just anyone.

This is one of the big reasons why White trucks give you a *competitive edge* in your business.

THE WHITE MOTOR COMPANY, CLEVELAND 1, OHIO Branches, distributors, dealers in all principal cities



do the most for your business

White gives you a competitive edge because . . .

- Every White is custom-engineered to the exact needs of the hauling job you want it for.
- White's advanced design and progressive innovations give you the biggest payoff in both

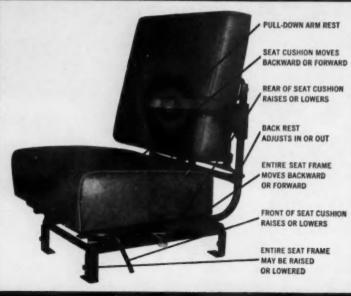
payload and performance.

- Your White is a protected investment, built for long life -with no artificial obsolescence.
- White's insistence on quality and craftsmanship pays off in

low maintenance and operating costs, year in and year out.

■ Your White is backed by a nationwide network of superservice facilities-specializing in heavy-duty trucks.









] 2cat 13

as flexible as you are

Here is incomparable comfort in a driver's seat. Fully adjustable. Tubular frame. Heavy-duty, coil-spring construction. Vinyl-resinimpregnated fabric upholstery. Curved back cushion. Arm rest padded in soft rubber. All adjustment control levers within easy reach of left hand. See it. Try it. Put yourself in the driver's seat . . . an Autocar driver's seat.

AUTOCAR

DIVISION OF THE WHITE MOTOR COMPANY
EXTON, PENNSYLVANIA

New Products

Continued from Page 217

ing jobs. It uses 6 x %-in. grinding wheels with ½-in. bore. Grinder has all ball bearing construction, spark breakers, dust chute and wheel guard protection.

Write Porter-Cable Machine Co., 105 Seneca St., Suracuse 4, N. Y.

Radiator Tester

checks cooling systems at pressures of 1 to 30 lb. Tester has an expansion device that fits inside the radiator filler neck instead of on the shoulder.



Gage tells if the system has a leak or not. Tester comes with universal adapters. It can also be used to check radiator pressure caps.

Write The AC Spark Plug Div., Public Relations Department, General Motors Corp., Flint 2, Mich. Phone: CEdar 4-5611.

Plastic Sleeve

is for protecting hoses ranging in size from ¼ to 2 in. in diameter. Plastic sleeve is unaffected by water, oil, gasoline and most other fluids



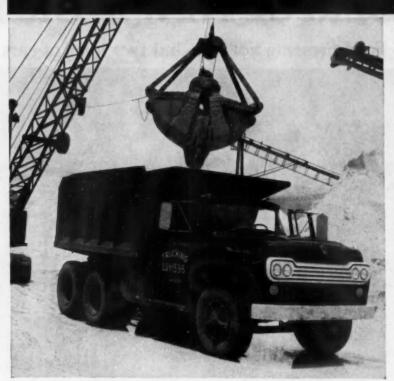
including hydraulic oils. It can also be used to insulate hot hoses such as on cleaning equipment.

Write The Aeroquip Corp., Jackson, Mich. for more information.

Spring Tension Tester

is for push-pull spring tension testing of the distributor breaker points and generator brush springs without removing parts from the vehicle. The right hand are measures "pull," the

(TURN TO PAGE 224, PLEASE)



One of 68 Hendrickson-equipped dump trucks in the fleet of Durrence Trucking Co., this Ford T-800 features a Hendrickson Model RT-320 Series Tandem Rear Suspension.

Durrence HENDRICKSON Standardizes on LANDEM

"I've been in the trucking business for 18 years, and during that time I have used Hendrickson Tandem Suspensions exclusively." So says Mr. Harold Durrence of Durrence Trucking Co., Ft. Lauderdale, Florida.

The company is presently operating a fleet of 68 dump trucks. The oldest of these, 1954 models, have averaged nearly 400,000 miles each, with one unit estimated to have given 600,000 miles of service.

Tough construction hauling is Durrence's specialty. On a recent job lasting five months, 20 of the company's trucks logged a total of 1,550,000 miles. Mileage such as this is quickly reflected in maintenance costs, which, because of Durrence's insistence upon quality components backed up by a thorough preventive maintenance program, have been highly satisfactory.

Says Mr. Durrence, "Our experience from the standpoint of maintenance and operating costs adds up to one thing: we will continue to specify Hendrickson Tandems on new equipment purchases."

All Hendrickson Tandem Suspensions are interchangeable between trucks, tractors and trailers—and are also interchangeable between makes of axles. Parts inventories can be reduced! Fleet operators can specify the design best suited for each particular operation.

STEEL, RUBBER OF AIR SPRINGS IN ONE BASIC DESIGN! TORQUE RODS TORQUE RODS EQUALIZING BEAM

RT SERIES, steel springs



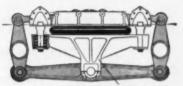
RS SERIES, rubber load cushions



Aluminum saddle standard on "RS" Series.

BRACKETS

AR SERIES, air springs



Aluminum saddle and air reservoir,

Now! Heat treated lightweight forged steel or forged aluminum equalizing beams for all three series of Hendrickson Suspensions.



HENDRICKSON MFG. COMPANY 8001 WEST 47th STREET

LYONS (Chicago Suburb), ILLINOIS





















A WONDERFUL NEW WORLD

For 1960 Ford presents not one, but two lines of cars



1. THE 1960 FORDS . . . Finest Fords of a Lifetime . . .

that bring a new world of elegance, comfort and savings to your business!

New fine-car elegance, new fine-car luxury at low Ford prices! The 1960 Ford is a completely new, completely different car—in the Ford tradition of beautifully functional proportions combined with distinctive classic styling. It has the kind of beauty that will stay young longer, and that means higher trade-in value.

New built-for-people comfort! There's more leg room, hip room, and knee room. Windshield posts are swept forward—well out of your way when you enter and exit. There is up to 31% more glass area all around (all safety glass) for greater visibility. Yet, you're shielded from sun glare above. Front seats are foam rubber padded, positioned at the perfect posture angle. New suspension, front and rear, gives far smoother ride.

New built-for-keeps body! Thanks to Ford's unique Quality Control program, each and every 1960 Ford is built to stay on the job—with the tightest, toughest, most durable Ford body ever constructed. And a new wider-than-ever frame of thicker-than-ever steel is the most solid Ford foundation yet (25% stronger for '60)!

You save every mile! The Thunderbird 292 and 352 V-8's, like the famous Mileage Maker Six, thrive on regular gas. A saving of up to \$1 on every tankful. You go 4,000 miles without changing oil. You can forget waxing forever. You normally get twice the muffler life from Ford's aluminized mufflers. You get Truck-Size brakes, the largest in Ford's field, for longer brake life. New soft-tread tires give better ride, last longer.

The best for business...

OF FORDS FOR BUSINESS!

... beautifully proportioned for your fleet needs!



2. THE Falcon ... THE NEW-SIZE FORD ...

the world's most experienced new car . . . brings new economy to your business!

Three years and three million miles of research and testing went into the development of the new Ford Falcon. Then, in a final demonstration, Falcons were sent out on Experience Run, U.S.A.—over every mile of numbered Federal Highway. The new Ford Falcon is the most thoroughly tested, most thoroughly proven new car ever introduced. You can depend on its performance—and bank on its economy.

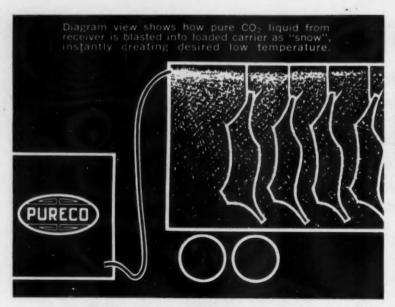
Up to thirty miles to the gallon on regular gasl Experience Run drivers gave it the "works" in stop-and-go city traffic . . . turnpike cruising—up hills and over mountains! In traffic and on the highway the Falcon proved its economy.

Your savings start with the price! And no extra cost power assists of any kind are needed. Insurance costs are lower. Servicing is quicker, easier, costs considerably less. Oil changes are stretched to 4,000 miles. Need for waxing is gone forever.

Big-car comfort! Big-car ride! Don't be fooled by the Falcon's handy, parkable new size. Inside, there's honest-to-goodness room for 6 big adults and all their luggage. And with Ford's famous Ball-Joint suspension to iron out the bumps, the Falcon rides the roughest road as smooth and solid as cars weighing up to a ton more.

FORD DIVISION, Ford Molor Company,

THE NEW 60 FORDS



SIOUX CITY DRESSED PORK

BLAST CHILLS WITH PURECO CO2

DELIVERS
PORK
"FRESH
AS
LOCAL
KILL"



Business is good at Sioux City Dressed Pork, Inc. "BLAST CHILLING" helps

Soon as Sioux City trucks are loaded with their pork cargoes each truck interior is sprayed with pure CO₂ "snow" from the PURECO CO₂ receiver. Trucks are then ready to roll . . . and product arrives at its destination with a "fresh kill" appearance.

As a refrigerant — Blast Chilling with PURECO CO₂ instantly establishes desired shipping temperatures. Truck's standard refrigeration system is just called upon to maintain this temperature. No heavy pull-down.

As a modified atmosphere — Blast Chilling with PURECO CO₂ helps retain fresh killed bloom of pork, beef, lamb and other meat products. It flushes moisture laden warm air out of carrier, replaces it with cold, dry vapor.

As an economy — Blast Chilling with PURECO CO₂ results in added life of mechanical units, and great savings in fuel and maintenance.

Contact any local Pure Carbonic office for all the facts on Blast Chilling with pure CO₂... as the sole refrigerant, or as an adjunct to other systems ... in over-the-road trucks, rail cars, or door-to-door operations.



Pure Carbonic Company

A division of Air Reduction Company, Incorporated Nation-wide "DRY-ICE" service-distributing stations in principal cities General Offices: 150 East 42nd Street, New York 17, N. Y.

AT THE FRONTIERS OF PROGRESS YOU'LL FIND AN AIR REDUCTION PRODUCT

New Products

Continued from Page 220

left hand arc measures "push." Black pointer returns to "O" when tension is released. Red pointer retains its reading for reference until turned

Contact Mr. Ralph Mansfield, Auto-Test Inc., 600 South Michigan Ave., Chicago, Ill. Phone: WA 2-5459.

Two-Way Mobile Radio is transistorized, is said to have very

is transistorized, is said to have very low battery drain. The new mobile radio is called General Electric's Transistorized Progress Line. Units are available up to 75-watt output. Smaller units are available in 30 and 10-watt sizes. The large 75-watt unit uses 0.040 amps—approximately the same drain as a car's electric clock takes.

Contact Miss Lucille U. White, General Electric Co., P.O. Box 4197, Lynchburg, Va. Phone: VIctor 6-7311, Ext. 662.

Filter Wrench

is a new service wrench for disposable oil filters. Wrench features a steel



alloy spring friction grip for easy and quick operation.

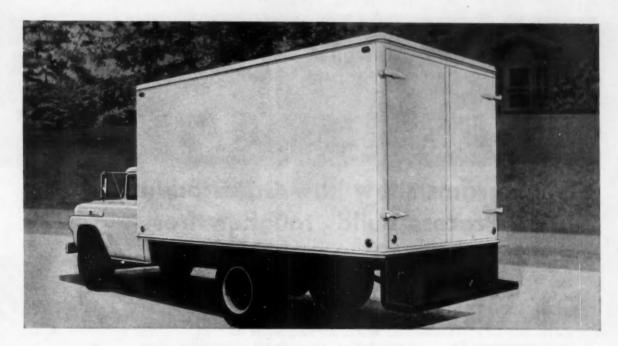
Write The AC Spark Plug Div., Public Relations Dept., General Motors Corp., Flint 2, Mich. Phone: CEdar 4-5611.

Battery Charger

comes in two models. The Terado Model No. 50180 has a 5 amp taper charge for 12 volt batteries. Hook-up is through the vehicle's cigarette lighter. The Model No. 50181 gives 10 amp taper charge, has two silicon rectifiers, connects directly to the battery or also plugs into the cigarette lighter. Size is only 3 x 5 x 6 in.

Contact John J. Kaul, Sales Mgr., Terado Co., 1068 Raymond Ave., St. Paul 8, Minn.

(TURN TO PAGE 229, PLEASE)



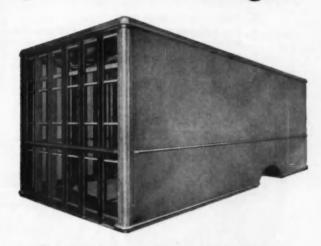
NEW Parish 2-Inch Radius Sections Provide More Cube, Greater Strength

Q1959 Dana Corporation

Truck bodies built by your Parish body builder give you more value for your dollar because of—

- ★ All Steel Construction—for rough-andtumble action
- ★ High Tensile Steel Members—at points of greatest stress
- ★ Replaceable Frame Units—for faster, lowercost repairs
- ★ Greater cube—for bigger, more profitable payloads
- ★ Extra Strength and Rigidity—far stronger than bodies made from lighter metals.

The next time you order truck bodies, specify Parish steel sections . . . for more strength, for greater durability, at lower cost. Your Parish body builder will install doors, panels and floor to your specifications, and for your particular requirements.



For the name of your nearest Parish body builder, write Parish Pressed Steel Division, Dana Corporation, Reading, Pennsylvania.

 DANA PRODUCTS: Transmissions * Universal Joints * Propeller Shafts * Axles * Tarque Converters * Geur Boxes * Power Take-Offs Power Take-Off Joints * Rail Car Drives * Railway Generator Drives * Stempings * Spicer

and Auburn Clutches . Parish Frames . Forgings

PARISH PRESSED STEEL

DANA Division of Dana Corporation Reading, Penna.

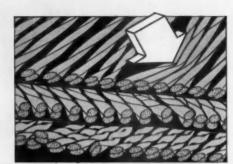
This emblem (HC) meansHIGHER CAPACITY

Diagrams show how Gates advanced HC Process builds tougher tires...

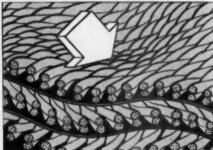
In tires built by previous methods, the thousands of cords within the tire body are not under equal tension—hence cannot work together as effectively to withstand sudden stress, distribute shock load, resist impact damage! See illustration A at right.

In tires built by Gates advanced HC Process, all cords within the tire body are placed under equal tension as a final step in the curing process itself. The tension on individual plies, cords, and tiny cord filaments is equalized as never before to combine their strength—for higher resistance to impact damage. These are the benefits that result—all contributing to lower tire operating cost:

- 1. Reduces tire growth in service by more than 80%.
- 2. Insures cooler operating temperatures—reduces possibility of heat blowouts.
- 3. Improves mileage materially.
- Strengthens nylon cord body and increases impact resistance by 25%. Insures maximum retreadability.
- 5. Simplifies tire matching for dual service.
- 6. Virtually eliminates tread cracking.



A. Cords not pre-tensioned cannot work together.





longer life...greater retreadability to resist impact damage!

... Backed by an unconditional ROAD-HAZARD GUARANTEE with no time or mileage limit! Should the Super Cross Box Time fail for

... not only against defects in workmanship and material, but ALL road hazards—blowouts, bruises, rim-cuts, etc., for full tread life. Should the Super Cross-Bar Tire fail for ANY reason, you will receive a new tire at once, with full credit for unused mileage, based on Gates standard adjustment schedule.

New Gates Nylon Super Cross-Bar



Built by Gates advanced HC Process, a postcuring step in manufacture which pre-tensions the thousands of tempered nylon cords within the tire.

Longer life, greater retreadability: Pre-tensioning equalizes the load-carrying ability of the cords, giving this tire far higher capacity to resist impact damage, far longer casing life, and far greater retreadability than conventionally-built nylon truck tires!

60 percent greater depth in the new, flatter, wider tread gives longer original mileage than standard truck tires—and the rugged cross-bar design eliminates danger of circumferential cracking. Advanced tread has multiple sipes to give positive resistance to side-slip!

100 percent nylon cord body, tougher tread rubber, advanced tread design—add them all to Gates HC Process and you have the *ideal* tire for driver-wheel use in long-distance highway hauling...a tire with 'lower cost per mile' written all over it!

Ask your Gates Distributor about the new Gates Nylon Super Cross-Bar Tires today. Look for his name in the Yellow Pages of your phone book—or write direct to Gates for your FREE copy of Gates Truck Tire Service and Engineering Data Book.

The Gates Rubber Company Sales Division, Inc.

Denver, Colorado

When ordering new equipment, always specify Gates (HC) Nylon Truck Tires

Gates Truck Tires



100% TOUGH

Inside and out, the Delco Extra-Duty battery is as tough as they come. It's a heavy-duty battery that's specially built to withstand rough fleet use. ■ Tough, life-adding features—such as rubber separators, heavy-duty plates and grids, protected connectors, hard all-rubber case—mean more miles of dependable service, more long-term economy. In addition, this battery is Dry Charge. Factory-fresh power. ■ Profit-minded fleet owners choose Delco Extra-Duty, another product of Delco-Remy, first in automotive electrical equipment.

QUALITY BUILT BY DELCO-REMY . . . AVAILABLE EVERYWHERE THROUGH







HUNTER CARGO HEATERS

LP-GAS-FIRED

- Exclusive new jettype burner provides high - volume heated air
- 24-hour maximum heat output—at very low cost
- No electrical power required
- Fully automatic thermostatic control
 no "hot spots"
 no "cold spots"
- No moving parts
 —minimum
 maintenance
- Conform to ICC safety regulations
- Compact use less cargo space
- Operate in coldest weather no flame-out
- Heat rating-16,000 BTU/hr.

Models for both permanent and portable installations.



HUNTER MANUFACTURING CO.
30525 AURORA RD.
5010N, OHIO
TRANSPORT HEATING AND REFRIGERATION

New Products

Continued from Page 224

Pneumatic Tire Changer

is for passenger car and light truck tires. The Model No. 58 tire changer has an automatic bead breaker that



breaks beads on wheel rim in one operation. Wheel hold-down is air powered.

Contact Mr. H. B. Oren, Jr., May Bros. Mfg. Co. Inc., 21300 Eureka Rd., Taylor, Mich. Phone: AV-4-8700.

Aluminum Cleaner

for cleaning truck bodies is an acidbrightener-cleaner which removes oxidation, corrosion and other surface dirt from aluminum metals. It is packaged in 30-gal drums.

Contact Mr. Edward P. Salter, Asst. Mgr., Transportation Sales Div., The DuBois Co. Inc., 1120 West Front St., Cincinnati 3, Ohio. Phone: GArfield

LP Gas Carburetor

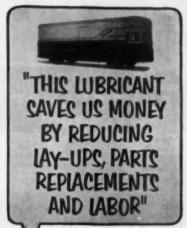
is a new chokeless type which requires no priming or choking. It's for use on small engines such as in



fork lift trucks. New unit fits % and 1 in. SAE manifold flanges.

Write the Ensign Carburetor Co., 1551 East Orangethorpe Ave., Fullerton, Cal.

(TURN TO NEXT PAGE, PLEASE)



says INTERSTATE DRESS
CARRIERS INC.
of New York and Leighton, Pa.

"If we were to state the percentage of savings we have made since using a LUBRIPLATE Lubricant for general chassis lubrication, it might appear that we were exaggerating. But our records speak for themselves. The four years we have used LUBRIPLATE have shown an astonishing drop in steering, universal joint and spring pin parts replacements. We plan to continue to use LUBRIPLATE exclusively."

Sidney Rothman, General Manager

REGARDLESS OF THE SIZE AND TYPE OF YOUR MACHINERY, LUBRIPLATE GREASE AND FLUID TYPE LUBRICANTS WILL IMPROVE ITS OPERATION AND REDUCE MAINTENANCE COSTS.

LUBRIPLATE is available in grease and fluid densities for every purpose . . . LUBRIPLATE H. D. S. MOTOR OIL meets today's exacting requirements for gasoline and diesel engines.



For nearest LUBRIPLATE distributor see Classified Telephone Directory. Send for free "LUBRIPLATE DATA BOOK" . . . a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.







New Products

Continued from Page 229

Metal Spray Powder is designed for rebuilding worn engine and compressor crankshafts. Called Colmonoy C-290, the new powder is high in chromium and nickel. It's applied with a Colmonoy spray welder but is not fused as in the "Sprayeld" process. Finished grinding of the spray journal completes the job. The metal spray over-



lay is said to give longer crankshaft life. Standard bearing inserts may be used with the overlay crankshafts.

Contact Mr. E. J. Lell, Vice Pres., Colmonoy Div. Wall Colmonoy Corp., 19345 John R St., Detroit s, Mich. Phone: Twinbrook 3-3800.

Nut Cracker

cuts frozen nuts from shock absorbers, muffler clamps exhaust flanges, spring new bolts, batteries, bumpers and engine supports. It will handle nuts from 4/16 up to ¾-in. The nut cracker has a 360° rotating cutter, can reach into tight places.

Contact Jane Clark, K-D Manufacturing Co., 526 North Plum St., Lancaster, Pa. Phone: EX 2-4136.

Battery Charger

has a heavy duty selenium rectifier. The unit gives 50 amp charging for both 6 and 12-volt batteries, is completely enclosed in its own small case. It operates on 115-volt current. Controls permit fast charging for up to



60 min or slow charging for a longer period. The charger is portable, weighs 45%-lb.

Contact Mr. George A. Smith, Adv. Mgr., Snap-On Tool Corp., 8026 28th Ave., Kenosha, Wis. Phone: Olympic 4-8681.

Carbon Remover

removes carbon from pistons and cleans a variety of engine parts. Called Oakite Composition No. 111, it mixes with water or oils, is easily rinsed off with water or steam.

Write Oakite Products Inc., 126 Recter St., N. Y. 6, N. Y.

Loud Speaker Amplifier is the Bogen Model No. BT25. It is transisterized, has a 25 Watt output, operates from a 12 or 6-volt battery. System can be used as a mobile loud (TURN TO PAGE 236, PLEASE)

CAB GUARD



16 gauge bonderized steel universal from year to year

MIDWEST GENERAL CORP. - DETROIT 26, MICH.



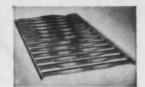


THE FIRST FULLY INTERCHANGEABLE VANS

With 1959 Fruehauf Volume Vans You Can Select The Combination Of Aluminum And Steel Components And Suspension To Fit Your Hauling Needs!



DIRECTLY INTERCHANGE ABLE ALUMINUM OR STEEL COMPONENTS



Crossmembers, Door Facinas, Roof Bows. and Structural Posts



Smooth or Exterior Post Side Panels

Fruehauf is first to offer you a fully interchangeable van line that makes sense. No more prohibitive cost penalties or delays in delivery usually associated with special requirements. Now you can specify individual van components either in steel or lighter weight aluminum, match them with the suspension you need, and combine both with the exterior you want-at production line prices.

And Fruehauf Volume & Vans are up to 20% lighter than comparable, conventional all-steel vans. All 1959 Volume Vans can be equipped with Fruehauf's new Safety Air Suspensions or S-Type Leaf Spring Suspensions. Let your Fruehauf representative help you select exactly the right van for your operation.





The new Fruehauf Safety Air Suspension is lighter in weight and simpler in design than any other Trailer air ride on the market. It is permanently level, swayless, and stable.

Revolutionary new '59 design allows the light-weight, low-cost S-2 Leaf Spring Tandem to be spotted wherever desired under the Trailer, relocated easily, quickly and permanently at any time.



World's Largest Builders of Truck-Trailers

FRUEHAUF TRAILER COMPANY

10940 Harper Avenue • Detroit 32, Michigan

PLEASE SEND THE FULLY ILLUSTRATED FOLDER ON THE COMPLETE LINE OF 1959 FRUEHAUF VOLUME VANS.

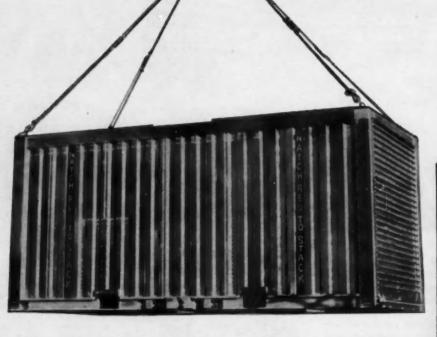
Name		
Company		
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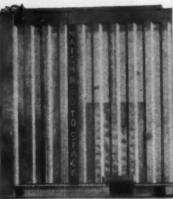


For Forty-Five Years-More Fruehauf Trailers On The Road Than Any Other Make!

CONTAINERIZE

Lower your cargo handling costs









with Grumman

with Aerobilt containers for truck, train, ship or plane

Grumman advances modern shipping container concept through aircraft design and production techniques. The new Aerobilt 17' aluminum container for marine, rail and platform semi-trailer gives you 40,000 lbs. payload and six-deep stacking fully loaded. The unit weighs less than 3,000 lbs. including corner hoisting, fork lifting and locking provisions. Unobstructed area inside totals 947 cubic feet. Unique weatherproof swing-through doors permit containers to be loaded and unloaded when placed end to end, thereby eliminating any special handling equipment. Aircraft monocoque construction of corrosion resistant high-strength aluminum alloy assures minimum weight, maximum ruggedness and years of maintenance-free service.

Let Grumman, with 29 years of aircraft experience, customdesign, service-test and produce containers to fit your present and future shipping needs for land, sea or air. For complete information, specifications and free booklet, write: Mr. George Skurla, Container Manager, Grumman Aircraft Engineering Corporation, Bethpage, Long Island, New York.



GRUMMAN

AIRCRAFT ENGINEERING CORPORATION

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NEW BENDIX-WESTINGHOUSE RELAY EMERGENCY VALVE WINS WIDE ACCEPTANCE BY TRUCKING INDUSTRY!

Proof indeed of the quality of the new Bendix-Westinghouse Relay Emergency Valve can be found in its widespread adoption by truckers from coast to coast. The new Bendix-Westinghouse Type RE-4 Valve, since its introduction in the spring of '59, has created a new standard of safety and performance in trailer braking systems. • The RE-4, developed and perfected by Bendix-Westinghouse, producer of the world's most widely used air brake systems, is a piston type operated valve, designed to provide constant output over a wide temperature range and assure instantaneous pressure balance of both tractor and trailer braking systems. What's more, this revolutionary new valve is completely interchangeable with all other valves. • Here are some of the reasons why trucking operators in ever-increasing numbers are taking advantage of the new Bendix-Westinghouse RE-4 Changeover Plan.

- FASTER APPLICATION AND RELEASE—Inlet and exhaust valve capacity is double that of older type relay emergency valves to provide safer, surer braking under all conditions.
- MORE POSITIVE BRAKING ACTION—The RE-4 provides a considerable reduction in "cracking" pressure allowing faster and better synchronization of trailer and tractor brakes, especially in lower delivery pressure ranges.
- EMERGENCY SAFETY FEATURE—In the event of a gradual loss of air pressure, the RE-4 applies trailer brakes gradually. A fast pressure drop, as in the case of trailer break-away, produces an immediate emergency braking application. For added safety, the tractor-trailer cannot be moved during initial charging, because trailer reservoir and brake chamber pressures build up simultaneously. When emergency line pressure reaches 60-70 psi, brake chambers are fully released.

BENDIX-WESTINGHOUSE CHANGEOVER PLAN LETS YOU EXCHANGE OLD TYPE VALVES FOR THE NEW RE-4

The RE-4 is engineered for complete operating compatibility with any existing braking system, regardless of age or make. Your nearby Bendix-Westinghouse representative will be happy to show you how you can exchange your present relay emergency valves for the new RE-4s at surprisingly low cost with our Changeover Plan.

- RUGGED, LIGHTWEIGHT CONSTRUCTION—Entire RE-4 assembly weighs only 4.7 pounds. Body and cover are of sturdy aluminum. Inlet and exhaust valves are of mechanical and chemical bonded rubber on corrosive resistant aluminum bodies. Emergency ports have filters for longer life and easier service. All seals, dynamic and static are of Buna N rubber compound to provide longer life in all temperature ranges.
- SIMPLE MAINTENANCE—When maintenance is required, an emergency piston assembly, called RE-4 INSERT, is available for easy installation. By simply removing two cap acrews from the bottom plate of the valve, pulling the old insert out and replacing it with the new, the job is done in minutes at very low cost.

For complete specifications on this new Bendix-Westinghouse Relay Emergency Valve, contact your nearest Bendix Distributor or write direct to Bendix-Westinghouse, Elyria, Ohio. There's no obligation.

Bendiz-Westinghous



General Offices and Factory—Elyria, Ohio. Branches—Berkeley, Calif., and Oklahoma City, Okla.

New Products

Continued from Page 230

speaker system or as a permanently mounted unit for shop or terminal use.

Contact Mr. M. S. Sumberg, Bogen Sales Mgr., Bogen-Presto Co., P.O. Box 500, Paramus, N. J. Phone: Diamond 3-5700.

V-Belt Drive

is made of a new high tensile cord said to increase belt strength 30 per cent. It's for use on tandem axle V-belt drives. The rib-top V-belt has the Gates "Flex-Weave" cover to protest the inside of the belt.

Contact Mr. Joe Bradley, Market Mgr., The Gates Rubber Company, 999 South Broadway, Denver 17, Colo. Phone: SHerman 4-1911.

Steam Cleaner

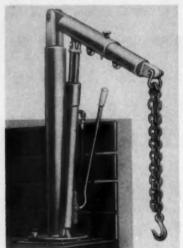
is the Aeroil Model No. CLS-600 with 600 gph capacity. Designed for heavy-duty service, the unit has a down draft burner. Cleaner features a chemical by-pass system so cleaning chemicals by-pass the heating coil permitting use of less expensive com-

pounds and preventing coil clogging problems. Standard equipment includes two cleaning guns and one rinse gun.

Contact Joseph Halperin, Sales Mgr., Aeroil Products Co., Wesley St., Hackensack, N. J. Phone: Dlamond 3-5900

Truck Mounted Crane

is also convertible to a portable or stationary shop crane. The Ausco unit is



offered in both manual-hydraulic and electric-hydraulic models (six or 12 volt battery). For truck use, crane mounts in a well in the truck bed. A full line of accessories is available.

Contact Arthur W. Schultz, Sales Mgr., Distributor Div., Auto Specialties Mfg. Co., St. Joseph, Mich. Phone: YU 3-2521.

Spark Plug

is the new AC "fire ring" model which has a stronger insulator that resists fouling to reduce pre-ignition and give easier hot engine starting. Center electrode has a knurled tip to give a better spark between the center and side electrode.

Contact Mr. W. J. Oldfield, Adv. & Promotion Director, AC Spark Plug Div. General Motors Corp., 1300 N. Dort Hwy., Flint 2, Mich.

Electrical System Tester

is called the Auto-Ranger meter. The single unit performs seven tests: Tach-Dwell-Ignition; Charging-Battery-Starter; Condenser-Coil-Magneto; Battery Loader; Tach-Dwell.

Contact Lowell E. DeWolf, Sales Mgr., Simpson Electric Co., 5200 W. Kinzie St., Chicago 44, Ill. Phone: EStebrook 9-1121.





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LESS DOWN TIME!

NEW pusher pump keeps trucks rolling



One year's field experience in hundreds of overland trucks establishes this startling fact: trucks equipped with Tokheim In-Tank Fuel Pumps require less down time. The reasons are obvious. First, a Tokheim will outlast a conventional pump 3 to 1. Then, because they are free from vapor-lock and engine starvation, Tokheim-equipped trucks continue to roll when others are down because of burned out

valves, or other engine conditions necessitating overhauls. These are facts no truck operator can afford to ignore. The Tokheim pusher pump delivers ample fuel to the carburetor at all times. It assures cold starts; solves engine fueling problems; makes any truck a more useful, profitable vehicle. See your truck equipment distributor today, or write to Tokheim for details and literature.

General Products Division

TOKHEIM CORPORATION

Fort Wayne, Indiana



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FUEL PUMP

A complete Purolator priced and packaged

For greater fleet economy and efficiency—Purolator's line of paper and waste type oil filters are now all available at special fleet prices in the famous Pur-Pack.

The Pur-Pack lineup of filter cartons covers virtually every filter type for fleets—in 6, 12, and 24-element quantities. The result—you can combine the cost-reducing qualities of superior Purolator filtration with the first-cost savings and new conveniences of Purolator.

Your Local Supplier has a stock of specially priced Purolator Filters in Pur-Pack cartons. Call him today or write for prices and complete information.







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OIL, AIR & FUEL FILTERS

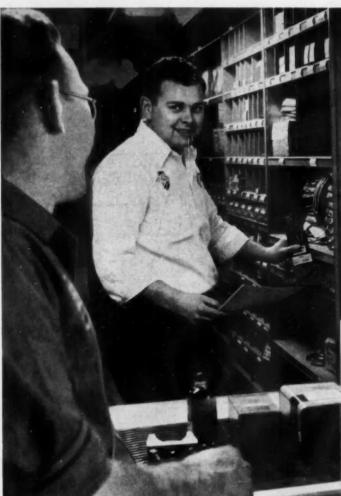
PUROLATOR PRODUCTS INC., RAHWAY, N. J.; TORONTO,

Filter Line for fleets!

Purolator Oil Filters for Fleets are available in durable, moneysaving Pur-Pack cartons—in the type you require, and the quantity you need.

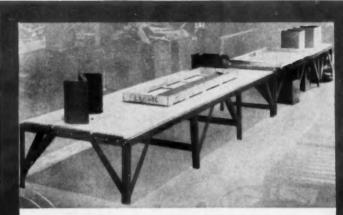
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"Purolator" and "Super-Micronic" Reg. U. S. Pat. Off.









REPUBLIC METAL LUMBER solves shop specialty equipment problems fastl Economical, versatile, as easy to use as common lumber. Simply measure, cut, assemble with common bolts and nuts. Strong, sturdy, steel. Reusoble. Delivered in bundles of ten pieces in 10-foot and 12-foot lengths. Call your Republic representative, or write direct.



REPUBLIC STAINLESS STEEL dual cargo tank truck solves hauling problems. One compartment handles corrosive alcohol-water mixture used in turboprop engines, the other compartment, kerosene. ENDURO® Stainless Steel may be the answer to your hauling problem.

SPEED PARTS SERVICE...

through Planned Storage and Republic Parts Bins

Republic Planned Storage and Parts Bins keep rolling stock on the road and profits up. Because accurate inventory controls reduce down time and speed terminal service operation.

With Republic on the job, factory-trained experts design bins and shelving from Republic's big line of standard steel stockroom equipment. A place for everything. Everything in its place. Every inch of stockroom space is utilized. Every unit is assembled for at-a-glance inventory control.

Republic Flexi-Bilt Parts Bins are designed and manufactured to provide complete flexibility. Easy shelf adjustment meets any stock storage problem. Shelves can be rearranged in seconds. No tools needed. Simply lift, pull, and reposition.

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Let factory-trained experts design Republic Parts Bins and Shelving to your specific needs and services. And, your Republic representative will handle all installation details.

CALL YOUR REPUBLIC REPRESENTATIVE, OR WRITE . .



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Volvo Enters U.S. Truck Market

Continued from Page 99

Perhaps most important of all, the Volvo line includes several specific American adaptations. For instance rear axles are either Timkin or Eaton 2-speed. Transmissions are either Volvo's own 5-speed unit (synchronized in all ranges) or the 10-speed Fuller RoadRanger. Fuel tanks, either

single or straddle-mounted, are of American build as are the radiator shutters, sealed beam headlights, fifth wheels and many other accessories.

Bumper to back of cab dimension on the larger model is 114-in.,

will create a problem where maximum length trailer is necessary. Where this is not critical, as in the case of the "Inter-Consult" cement hauler, the Volvo is ready now. Where there is a problem, the 50-in. COE unit will challenge all comers.

END

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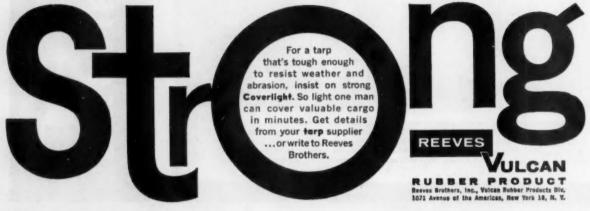
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Carries more editorial material of interest to men in charge of maintenance of truck and bus fleets, than any other magazine.

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Chestnut & 56th Sts., Phila. 39, Penna.





Thermo King Diesel-Powered Reefer

Continued from page 116

Defrosting is based on Thermo-King's reverse cycle system. It starts automatically at pre-determined time intervals . . . depending on the type of operation. Defrosting stops when evaporator coil is clear of frost.

Instrumentation includes engine glow plug switch and indicator, starting switch, thermometer, ammeter, oil pressure gage, engine temperature and oil pressure safety switches, water temperature gage, manual defrost control, refrigerant high pressure gage, engine hour recorder.

Maintenance is set-up on a weekly (or 50-hr), 100-hr and 200-hr basis. Weekly service is cleaning and refilling the oil-bath air filter.

The 100-hr service adds to this changing the engine oil, cleaning the oil filter, inspecting injection pump and governor oil level, checking coolant level.

In addition to

the above, the 200-hr service includes inspection of engine control linkages, engine valve clearances, water pump oil level, anti-freeze, charging rate, battery, battery cables and terminals.

Also checked at this time is possible shortage of refrigerant and compressor oil, plus test of the defrost cycle and lubrication of condenser and radiator fan bearing.

Please Resume Reading Page 119

Strange Man: "Hullo, I'm your new neighbor. Do you folks have a bottle opener?"

Truck Mechanic's Wife: "Yeah, we got one, but he ain't home from the shop yet."

modern air starting slash maintenance costs

NEW SIZE 10BM HEAVY-DUTY AIR STARTING MOTOR

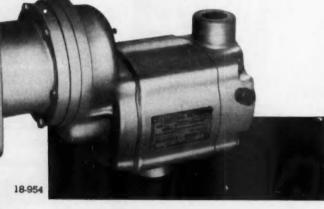
Outperforms all other air starting motors of comparable size. Fully interchangeable with electric starters, with these important advantages:

- faster starting in any weather with no power loss
- eliminates expensive electrical components and costly maintenance
- · lighter weight for more payload
- · fewer highway repairs

10 lbs. LIGHTER . . .
50% MORE POWER . . .
uses 30% LESS AIR . . .



(for diesel displacement from 400 to 2300 cu. in.—gas or gasoline from 800 to 4600 cu. in.)



How Safeway Trails Uses Safety

Continued from Page 95

board, together with signs explaining "This is the safety equipment carried for your protection." Another board displays attractive photographs showing the extensive training Trailways operators receive. Safeway Special Representative H. W. "Jimmie" Evans is on hand to explain the training program to Fair visitors.

Prior to the appearance of the Travel Fair in a community, Bauer and Tripp representatives arrange presentations of special safety citations to Safeway by a local group. Trailways publicizes the award in newspapers, radio and television and also takes advertising space to thank the community.

One of the main features at the Travel Fairs is an exhibit of the tachometer which passengers see as they board every Trailways coach.

"We use advertising

and publicity to point up the fact that the 'tach' gives an exact record of every moment during which the coach is in operation," said Athey. "It indicates each stop and start, and clocks the driver on his speed."

Athey was a judge during a recent Teen-Age Driver Training Road-E-O sponsored by Philadelphia's Junior Chamber of Commerce. Participating in the contest were students from the city's high schools. Major General L. C. Jaynes (Ret.) president of the National Trailways Bus System, presented the coveted Trailways Bus System driver training school.

"Presentation of that trophy was part of our campaign to sell the 'Safeway Safety' slogan to the public," says Athey.

END

Please Resume Reading Page 96

motors_70% ×



SIZE 3BM AIR STARTING MOTOR

For diesel displacement up to 300 cu. in.—gas or gasoline up to 600 cu. in.

SIZE 5BM AIR STARTING MOTOR

For diesel displacement from 250 to 500 cu. in.—gas or gasoline from 600 to 1250 cu. in.

SIZE 20BM AIR STARTING MOTOR

For diesel displacement from 900 to 9000 cu. in.—gas or gasoline from 1250 to 20,000 cu. in.

18-954-1



on the savings made possible with I-R's complete line of Air Starting Motors, send for your copy of "Go Modern—Start With AIR".

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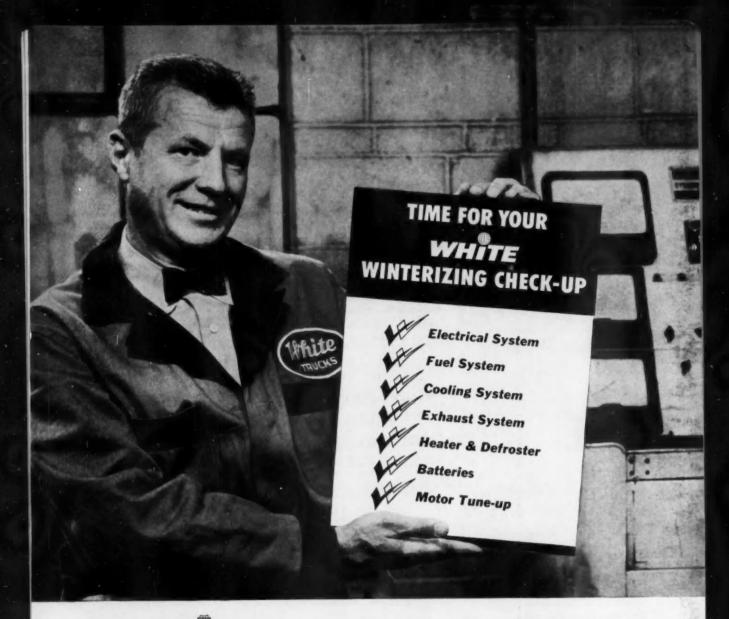
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This WHITE superservice "winterizing" will keep your trucks rolling all winter long

Statistics show that winter troubles hit hardest at electrical and fuel systems. Cause costly road failures and down time.

You can avoid all winter problems with a complete White Superservice Winterizing Check-up now.

Your entire truck gets an absolutely thorough inspection, cleaning, and winter preparation . . . a going over that helps you lick winter failures by preventing them.

Your White Superserviceman is a factory-trained specialist in heavy-duty trucks... and proud of it! And the White shop he works in has every facility needed to guarantee top winter performance from your

trucks. So take advantage of this quick, convenient and thorough one-stop service for all makes of trucks. Don't wait for winter...send your trucks now—for a White Superservice Winterizing Check-up.

THE WHITE MOTOR COMPANY CLEVELAND 1, OHIO

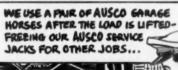
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LEVER BRINGS
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SPRING LOADED
HANDLE TAKES
OVER FOR AN
EASY, HIGH LIFT





Ausco offers a complete line of rugged, safe, easy-to-use hydraulic service jacks: 1 14, 1 15, 2, 4, 10 and 20 ton capacity EVERY AUSCO HYDRAULIC JACK IS INDIVIDUALLY TESTED

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Superior Features for Superior Performance



A basic necessity for a speedy, efficient service program — plenty of Ausco roll-away service jacks. Check your equipment now. If you need mare jacks or replacements, call your Ause jabber. Capacities 1½ ton to 20 tons.



Handles any over-the-highway truck transmission with power to spare. Seves many man hours and avoids injuries to personnel and damage to units. Raises high enough (3034") to transfer to bench or fixture. Full 2000 lbs. capacity.



Change Tires Faster with AUSCO Dual Wheel Dolly . . .

Take all the back-breaking work out of removing and replacing heavy tires. A stordy Ausco hydraulic unit does all the lifting. Four ball-backing coster wheels for complete easy mobility.



Model 931C Six-wheeler with "bustle-back" Sleeper-cab

New 50-inch Tilt-cab in Diamond T Model 931C

Tilts by hand...open in seconds

This new Tilt-cab series means bigger payloads—both in weight and "cube." The compact 931C was designed for reduced chassis weight, and the short 50-inch BBC dimension permits maximum length trailers... also 25 to 27-foot doubles in Western states. 28-inch bumper to front axle dimension is favorable for peak payloads where the "bridge formula" applies.

Three versions of new cab

A choice of three cabs in the 931C means the right cab for any operation. The basic 931C has a 50-inch two man cab. Sleeper cabs include a 25-inch "bustle-back" version . . . and a full-skirted sleeper cab with a 30-inch berth. BBC on the full-skirted cab is 80 inches.

Six Cummins diesel engines power this great Tilt-cab series, ranging from 180 to 300 h.p. Engine installation is conventional; no tilting or canting to create service problems.

The entire unit is ruggedly built with roadproven components, giving assurance of hundreds of thousands of miles with minimum maintenance.

All Diamond T's are custom-built

Like all Diamond T trucks, every Model 931C is custom-built to match the job. Production options include: 12 rear axles, both single-speed and two-speed; 8 tandem rear axles, with two-speed tandems available; 9 main transmissions from four-speed to twelve-speed; 4 auxiliary transmissions.

Diamond T builds the right truck for every heavyduty service: on highway or off; gas, diesel or LPG power; six or V-8; conventional or Diamond T Tilt-cabs. For construction and performance to do your job best... see your Diamond T dealer.

DIAMOND T TRUCKS

Established 1905



The Diamond is for Quality

